

Rectifier Diodes

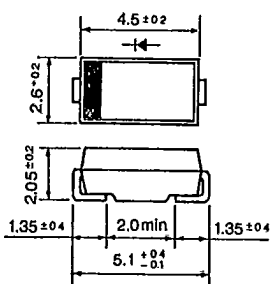
■ $V_{RM}: 100 \sim 1500V$ ■ $I_o: 0.5 \sim 3.0A$

SFPM/AM/EM/RM/RO

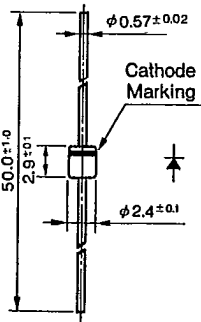
Rating/ Characteristics		Absolute Maximum Ratings					Electrical Characteristics (Ta=25°C)				Others													
		V _{RSM} (V)	V _{RM} (V)	I _O (A)	I _{FSM} (A)	T _J (°C)	T _{stg} (°C)	V _F (V)		I _R (μA)	I _{R(H)} (μA)	Outline Drawing	Weight(g)	Taping	Note									
Type No.			()= with Fin	50Hz Half Sine Wave Single Pulse			max	I _F (A)	V _R =V _{RM} max	V _R =V _{RM} Ta=100°Cmax														
SFPM-52	250	200	0.9	30	-40~+150		1.0				①	0.072		Surface Mount										
SFPM-54	450	400																						
SFPM-62	250	200																						
SFPM-64	450	400																						
AM01Z	250	200	1.0	35	-40~+140		0.98	1.0	10	50	②	0.13	○											
AM01	450	400																						
AM01A	650	600																						
EM01Z	250	200																						
EM01	450	400		45			0.97																	
EM01A	650	600																						
EM 1Y	150	100																						
EM 1Z	250	200																						
EM 1	450	400		35																				
EM 1A	650	600																						
EM 1B	850	800																						
EM 1C	1050	1000																						
EM 2	450	400		1.2			80				0.92	1.2			5			④	0.3	○				
EM 2A	650	600																						
EM 2B	850	800																						
RM 1Z	250	200		1.0			50				-40~+130	0.95						1.0					⑤	0.44
RM 1	450	400																						
RM 1A	650	600																						
RM 1B	850	800																						
RM 1C	1050	1000	0.8	40	1.2	1.0						○												
RM 1D	1250	1200																						
RM 1E	1450	1400																						
RM 1F	1550	1500	0.6	25	1.4														○					
RM 11A	—	600																						
RM 11B	—	800																						
RM 11C	—	1000	1.2	100	0.92																			○
RM 10Z	—	200																						
RM 10	—	400																						
RM 10A	—	600																						
RM 10B	—	800	1.2	150	-40~+140	0.91	1.5								○									
RM 2Z	250	200																						
RM 2	450	400																						
RM 2A	650	600																						
RM 2B	850	800	100	-40~+130													○							
RM 2C	1050	1000																						
RM 3	400	400																						
RM 4Y	150	100																						
RM 4Z	250	200	1.7	200	-40~+150	0.95	3.0						○											
RM 4	450	400																						
RM 4A	650	600																						
RM 4B	850	800																						
RM 4C	1050	1000	(3.0)	150		0.97													○					
RM 4AM	650	600																						
RO 2Z	250	200																						
RO 2	450	400																						
RO 2A	650	600	1.2	80	-40~+130	0.92	1.5								○									
RO 2B	850	800																						
RO 2C	1050	1000																						

○ : Available

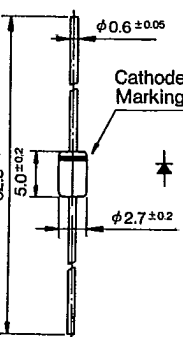
Outline Drawing ①



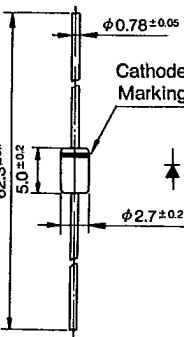
Outline Drawing ②



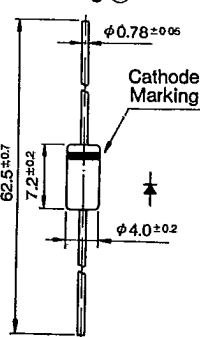
Outline Drawing ③



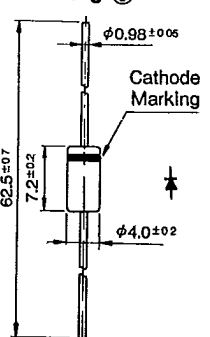
Outline Drawing ④



Outline Drawing ⑤



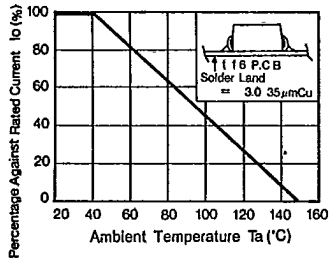
Outline Drawing ⑥



①~⑥. Plastic Molding : UL94V-0 or Equivalent

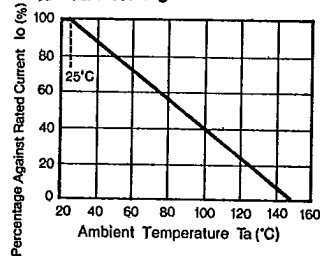
SFFPM-52,54 SFFPM-62,64

Io-Ta Deratings



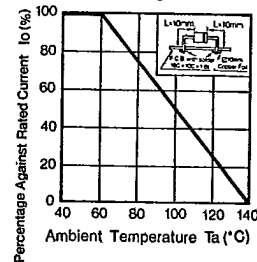
AMO1 Series

Io-Ta Deratings



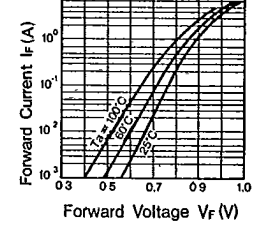
EM01, EM 2 Series

Io-Ta Deratings



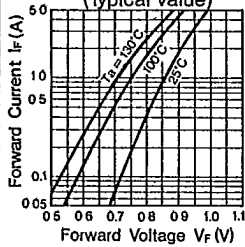
EM 1 Series

If-Vf Characteristics (Typical Value)

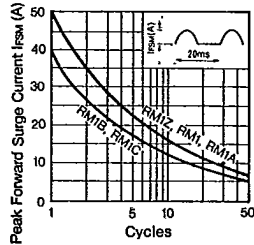


RM 1 Series

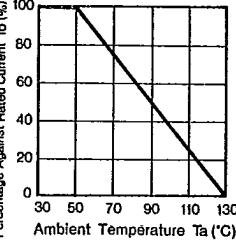
If-Vf Characteristics (Typical Value)



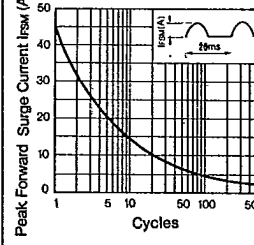
IFSM Characteristics



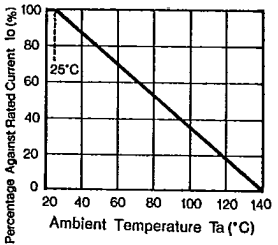
Io-Ta Deratings



IFSM Characteristics

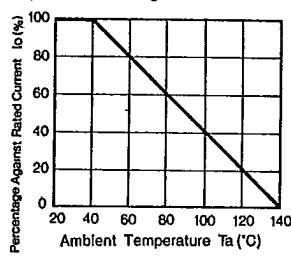


Io-Ta Deratings



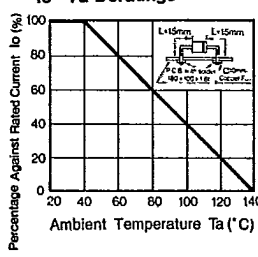
RM 11 Series

Io-Ta Deratings



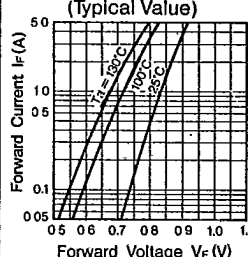
RM 10 Series

Io-Ta Deratings

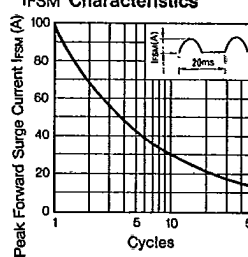


RM 2 Series

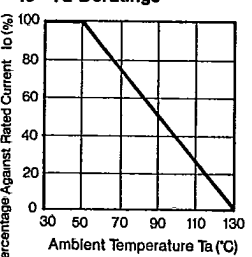
If-Vf Characteristics (Typical Value)



IFSM Characteristics

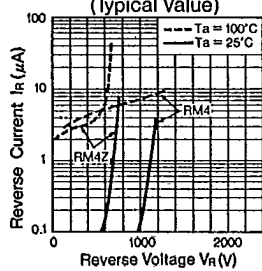


Io-Ta Deratings

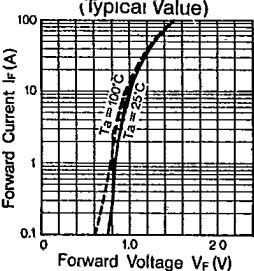


RM 4 Series

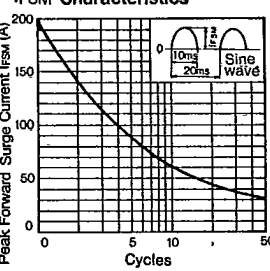
Ir-Vr Characteristics (Typical Value)



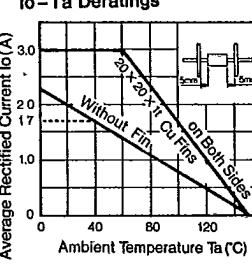
If-Vf Characteristics (Typical Value)



IFSM Characteristics

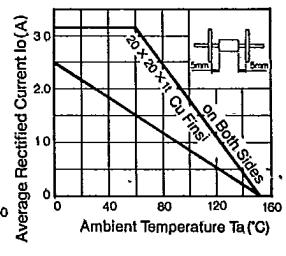


Io-Ta Deratings

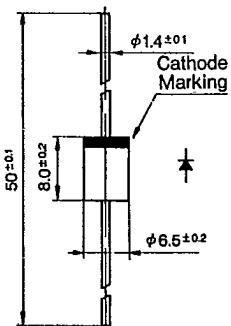


RM 4AM

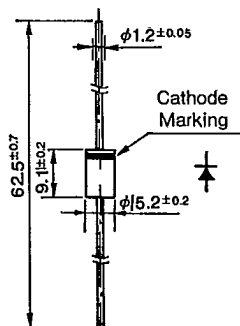
Io-Ta Deratings



Outline Drawing ⑦

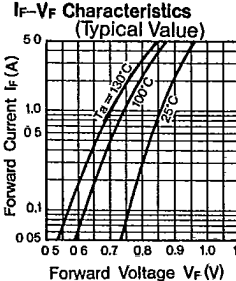


Outline Drawing ⑧

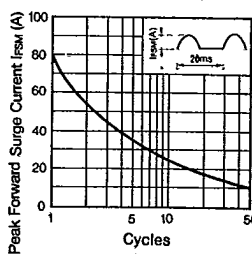


RO 2 Series

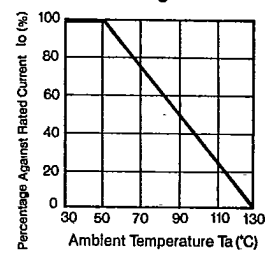
If-Vf Characteristics (Typical Value)



IFSM Characteristics



Io-Ta Deratings

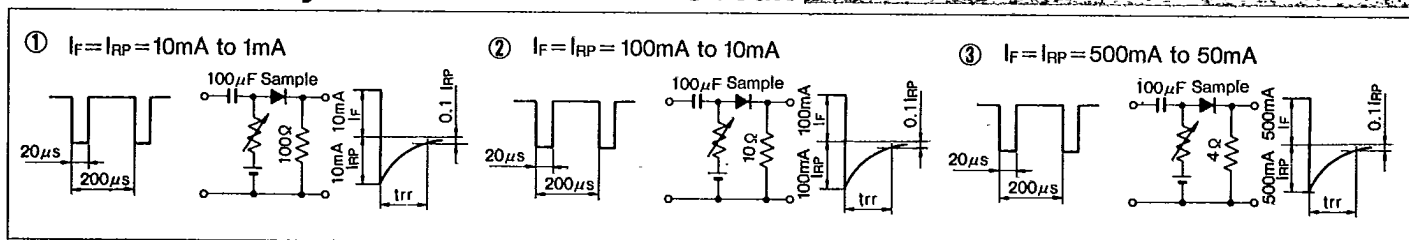


Symbols/trr Measurement Circuit

Symbols

V_{RSM}	Peak Reverse Surge Voltage	I_{RSM}	Peak Reverse Surge Current	T_{stg}	Storage Temperature
V_{RM}	Peak Reverse Voltage	I_R	Reverse Current	t_{rr}	Reverse Recovery Time
V_{P-P}	Reverse Voltage (Peak to Peak)	I_{RP}	Peak Reverse Current	C_t	Total Capacitance Between Terminals
V_R	Reverse Voltage	$I_{R(H)}$	Reverse Current (High Temperature)	$R_{th(j-c)}$	Thermal Resistance, Junction to Case
V_F	Forward Voltage	I_Z	Avalanche Current	r_z	Temperature Coefficient of Breakdown Voltage
V_B	Breakdown Voltage	I_{ZSM}	Allowable Avalanche Current	R_z	Equivalent Resistance of Breakdown Region
I_o	Average Rectified Forward Current	T_a	Ambient Temperature	$P_{F(AV)}$	Average Forward Power Dissipation
I_F	Forward Current	T_j	Junction Temperature	I_t^2	I_t^2 limiting Value
$I_{F(AV)}$	Average Forward Current	T_{opr}	Operating Ambient Temperature		
I_{FSM}	Peak Forward Surge Current	T_c	Case Temperature		

Reverse Recovery Time Measurement Circuit



Taping Specifications

Excluding High Voltage Diodes

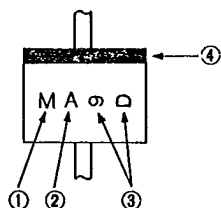
Designation	Dimension (in mm)	Packaging Dimension and Marking	Quantity
V Add Suffix [V] to Type No.	Tape Carrier Method (1) Right side of taping direction is cathode. (2) Place electrode side down when casing. (3) Provide leader tape of 150~200mm at beginning of tape. (4) Provide space of more than 10 pitches each for beginning and end of tape.	Reel	1,800 pcs per reel
V Add Suffix [V] to type No.	Axial Taping	Reel	5,000 pcs per reel (2.7 ϕ body) 3,000 pcs per reel (4.0 ϕ body)

Taping Specifications

Designation	Dimension (in mm)	Packaging Dimension and Marking	Quantity
V1 Add Suffix [V1] to Type No.	Axial Taping 	Ammunition Pack 	2,000 pcs per box (2.7 φ body) 1,000 pcs per box (4.0 φ body)
VO Add Suffix [VO] to Type No.	Axial Taping 	Ammunition Pack 	2,000 pcs per box (2.7 φ body) (2.4 φ body)
V3 Add Suffix [V3] to Type No.	Axial Taping 	Reel 	1,500 pcs per reel (5.2 φ body)
V4 Add Suffix [V4] to Type No.	Axial Taping 	Ammunition Pack 	1,000 pcs per box (5.2 φ body)
W Add Suffix [W] to Type No.	Radial Taping 	Ammunition Pack 	4,000 pcs per box (2.7 φ body) (0.6 φ lead)
WS Add Suffix [WS] to Type No.	Radial Taping (Applicable to AO Series) 	Ammunition Pack 	2,500 pcs per box (2.4 φ body)
WK Add Suffix [WK] to Type No.	Radial Taping (Applicable to AO Series) 		

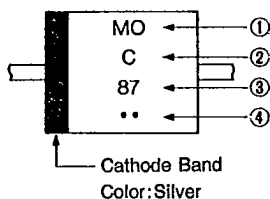
Marking Guide

1 Small TMD



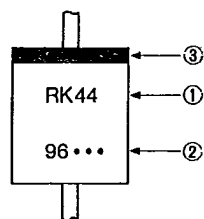
- ① Type Designation (in abbreviation)
AM01 is abbreviated as M.
- ② Class Designation
Z: 200V, No Letter: 400V, A: 600V
- ③ A: Year (Last Number of AD Year)
B: Month (Jan. to Sept. are represented by numbers 1 to 9 respectively, and Oct., Nov., and Dec. are abbreviated as O, N and D respectively)
- ④ Cathode Band: Successive Band, however AU02 Type is Non-Successive Band.

2 E/EO Type TMD



- ① Type Designation (in abbreviation)
EM01 is abbreviated as MO, EM2 is abbreviated as M2.
- ② Class Designation
Z: 200V, No Letter: 400V, A: 600V
B: 800 V, C: 1000V, F: 1500V
However, EU02A to be marked 2A, and EU2YX to be marked Y.
- ③ Abbreviations Representing Production Period
A: Year (Last Number of AD Year)
B: Month (1~9, O, N, D)
- ④ Production Period Divided in 3 ten day terms
• : 1st 10days •• : 2nd 10days ••• : 3rd 10days

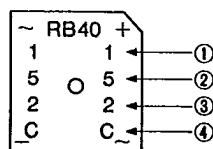
3 R Type TMD



- ① Type Designation: Mark in 2 sets
- ② Production Period: Mark in 4 sets
A: Year (Last Number of AD Year)
B: Month (1~9, O, N, D)
- ③ Production Period Divided in 3 ten day terms
• : 1st 10days •• : 2nd 10days ••• : 3rd 10days
- ④ Cathode Band Color: Silver: For Power Supply
Yellow: For Middle Speed
Red : For High Speed and Ultra-High Speed

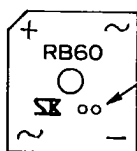
4 RB40/60

(RB40 Series)



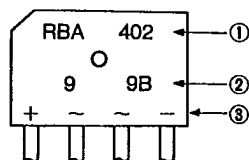
- ① Peak Reverse Voltage Designation
1, 2, 4, 6, C
Production Period
- ② Year (Last Number of AD Year)
- ③ Month (1~9, O, N, D)
- ④ Divided in 3 ten day terms
A: 1st 10days, B: 2nd 10days
C: 3rd 10days
Color Designation: Silver

(RB60 Series)



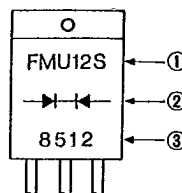
Dot Designation RB601 Violet
RB602 No Color
RB604 Blue
RB606 White

5 RBV/RBA



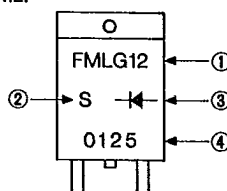
- ① Type Designation
- ② Lot Number
1st : Year (Last Number of AD Year)
2nd: Month (1~9, O, N, D)
3rd : Divided 1~3 ten day Terms
A: 1st 10 days B: 2nd 10 days
C: 3rd 10 days
- ③ In-Put Designation

6 TO220 Type (FM or CT Type)



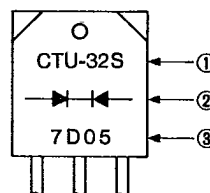
- ① Type Designation
Show FMU-12S as FMU12S.
- ② Polarity: Rectifier Symbols
- ③ Lot Number (Laser Marking)
1st : Year (Last Number of AD Year)
2nd : Month (0~9, O, N, D)
3rd, 4th: Day

7 TO220 Type (FM or CT Type, single chip)



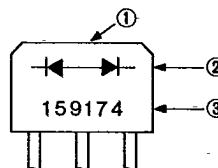
- ① Type Designation: Omit Last Letter
Show FML-G12S as FMLG12.
- ② Last Letter of Type Designation
- ③ Polarity: Rectifier Symbols
- ④ Lot Number (Laser Marking)
1st : Year (Last Number of AD Year)
2nd : Month (0~9, O, N, D)
3rd, 4th: Day

8 TO3P Type (FM or CT Type)



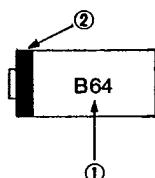
- ① Type shown in full designation
However, CTB-34/34S/34M are marked as CTB-34, CTU-G3DR is marked as CTUG3DR.
- ② Polarity: Rectifier Symbols
- ③ Lot Number:
1) M, U, G and L Types
First Number : Last Digit of AD Year
Second Number : Month
Third and Fourth Numbers: Day
Fifth Number : None
2) For types CTB-34/34S/34M, the fifth letter shows type designation. If no fifth number, the type is CTB-33 or CTB-34.
3) Marking Color: Silver

9 MI-10/15 Type



- ① MI-10/15 is die-stamped on the top of the case.
- ② Rectifier Symbols
- ③ Lot Number:
First Number : Peak Reverse Voltage:
(Letter) 0=50V, 1=100V, 2=200V,
4=400V, 6=600V, C=1000V
Second Number : Last Digit of AD Year
Third Number : Month
Fourth and Fifth Numbers: Day
Sixth Number : Production number and
U: Voltage Doubler Type

10 SFP Type



- ① Type Designation:
SFPB-64 is abbreviated at B64.
- ② Cathode Band