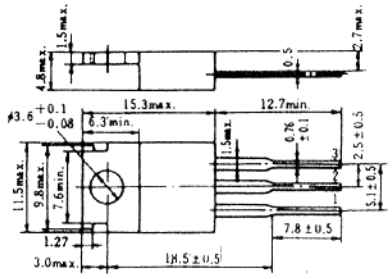
HITACHI

2SD476Ⓚ, 2SD476AⓀ

SILICON NPN TRIPLE DIFFUSED

POWER SWITCHING
COMPLEMENTARY PAIR WITH 2SB566Ⓚand
2SB566AⓀ



1. Base
2. Collector (Flange)
3. Emitter

(Dimensions in mm)

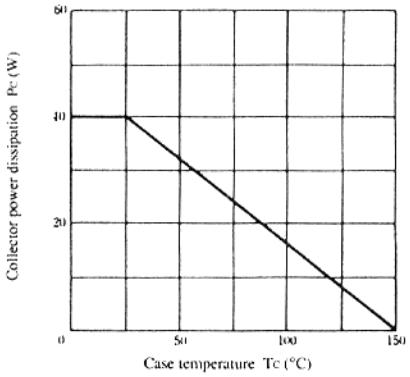
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD476Ⓚ	2SK476AⓀ	Unit
Collector to base voltage	V_{CBO}	70	70	V
Collector to emitter voltage	V_{CEO}	50	60	V
Emitter to base voltage	V_{EBO}	5	5	V
Collector current	I_C	4	4	A
Collector peak current	$i_{C(peak)}$	8	8	A
Collector power dissipation	P_C*	40	40	W
Junction temperature	T_j	150	150	°C
Storage temperature	T_{stg}	−55 to +150	−55 to +150	°C

* Value at T_C = 25°C.

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

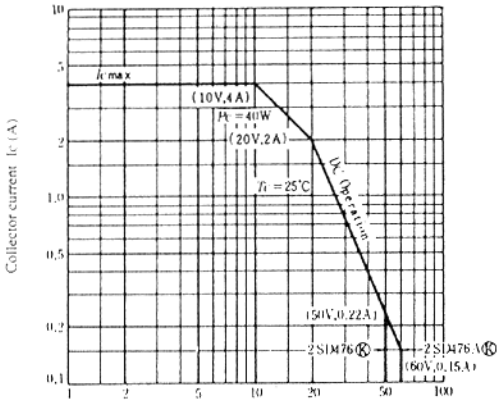
Item	Symbol	Test Condition	2SD476Ⓚ			22D476AⓀ			Unit
			min.	typ.	max.	min.	typ.	max.	
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	70	—	—	70	—	—	V
Emitter to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 50mA, R_{BE} = ∞	50	—	—	60	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	5	—	—	5	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = 50V, I_E = 0	—	—	1	—	—	1	μA
DC current transfer ratio	h_{FE1}	V_{CE} = 4V, I_C = 1A (Pulse Test)	60	—	200	60	—	200	
	h_{FE2}	V_{CE} = 4V, I_C = 0.1A	35	—	—	35	—	—	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 2A, I_B = 0.2A	—	—	1.0	—	—	1.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$		—	—	1.2	—	—	1.2	V
Gain bandwidth product	f_T	V_{CE} = 4V, I_C = 0.5A	—	7	—	—	7	—	MHz
Turn on time	t_{on}	V_{CC} = 10.5V $I_C = 10I_{B1} = -10I_{B2}$ = 0.5A	—	0.3	—	—	0.3	—	μs
Turn off time	t_{off}		—	3.0	—	—	3.0	—	μs
Storage time	t_{stg}		—	2.5	—	—	2.5	—	μs

* The 2SD476Ⓚand 2SD476AⓀare grouped by h_{FE1} as follows.

B	C
60 to 120	100 to 200

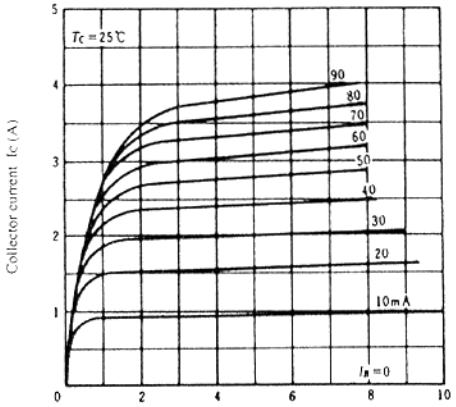
2SD476Ⓚ, 2SD476AⓀ

AREA OF SAFE OPERATION



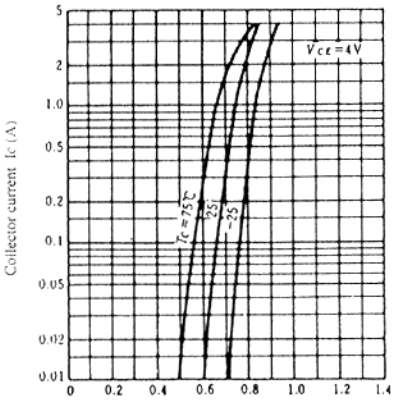
Collector to emitter voltage V_{CE} (V)

TYPICAL OUTPUT CHARACTERISTICS



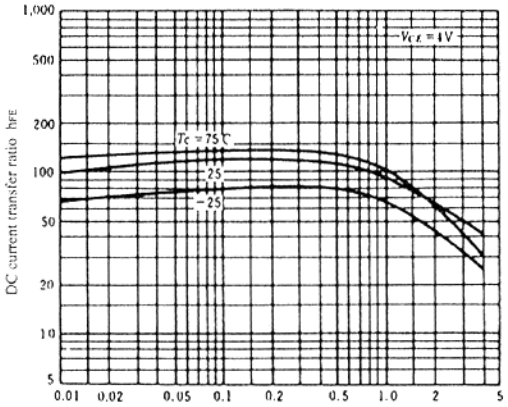
Collector to emitter voltage V_{CE} (V)

TYPICAL TRANSFER CHARACTERISTICS



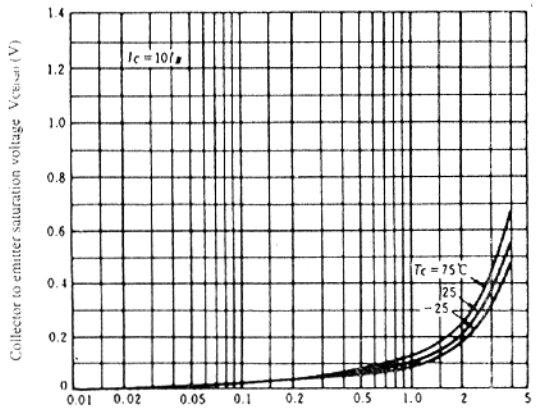
Base to emitter voltage V_{BE} (V)

DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



Collector current Ic (A)

COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



Collector current Ic (A)