TYPE CV12

UP TO 400V 3.1A (RMS)
THYRISTOR

■ MAXIMUM ALLOWABLE RATINGS

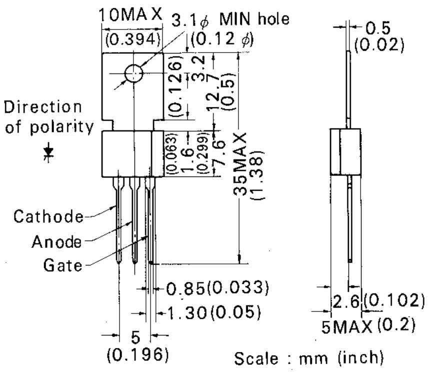
Hitachi Type Items Symbols Units			CV12B	CV12C	CV12D	CV12E
Repetitive Peak Reverse Voltage	V_{RRM}	V	100	200	300	400
Nonrepetitive Peak Reverse Voltage	V_{RSM}	V	200	300	400	500
Repetitive Peak Off-State Voltage	V_{DRM}	V	100	200	300	400
Rated Average On-State Current	$I_{T(AV)}$	A	2 (Single-phase, half-wave, 180° conduction T_c=−40~+35°C)			
Surge On-State Current	I_{TSM}	A	20 (10m sec, conduction, sine half-wave 1 cycle)			
I^2t Limit Value	I^2t	A^2 sec	1.6 (Time=2~10m sec, I : RMS value)			
Peak Gate Power Dissipation	P_{GM}	W	0.5			
Average Gate Power Dissipation	$P_{G(AV)}$	W	0.1			
Peak Gate Voltage	V_{GM}	V	Forward=6 Reverse=6			
Peak Gate Current	I_{GM}	A	0.2			
Maximum Rate of Rise of Forward Current	di/dt	A/μs	20 (forward voltage immediately before turn-on=0.5×V_{DRM})			
Junction Temperature	T_j	°C	−40~+110			
Storage Temperature	T_{stg}	°C	−40~+110			
Weight		g	1.5			

Condition: R_{GK}=1kΩ

■ CHARACTERISTICS

Items	Symbols	Units	Ratings
Maximum On-State Voltage	V_{TM}	V	2.2 (T_j=110°C, I_{TM}=4 Apeak)
Minimum Triggering Gate Voltage	V_{GT}	V	0.8 (T_j=25°C, V_D=6Vdc)
Maximum Nontriggering Gate Voltage	V_{GD}	V	0.2 (T_j=+110°C, V_D=6Vdc)
Minimum Triggering Gate Current	I_{GT}	mA	1.0 (T_j=25°C V_D=6Vdc)
Maximum Nontriggering Gate Current	I_{GD}	mA	0.15 (T_j=−40~+110°C, V_D=6Vdc)
Maximum Rate of Rise of Forward Blocking Voltage	dv/dt	V/μs	3 (T_j=110°C, 0.5×Rated V_{DRM}, Gate Open Circuit)
Thermal Resistance	R_{th}	°C/W	10 (Junction to Tab)

Condition: R_{GK}=1kΩ



Scale : mm (inch)

Fig. 1 OUTLINE DRAWING

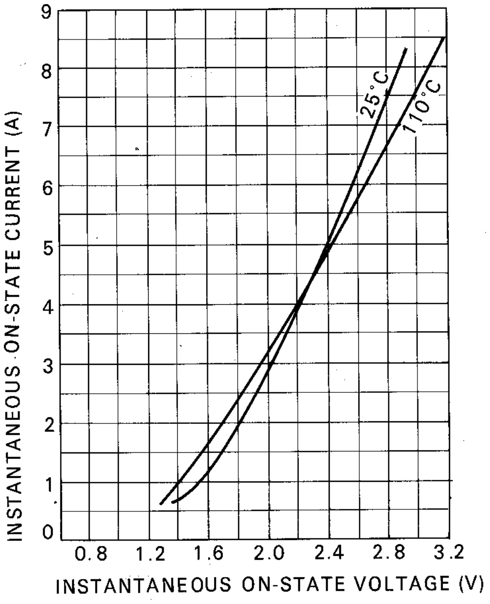


Fig. 2 MAX. FORWARD CHARACTERISTICS