

■ MAXIMUM ALLOWABLE RATINGS

Hitachi Type			CV12B	CV12C	CV12D	CV12E
Items	Symbols	Units				
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 $T_c = -40 \sim +35^\circ\text{C}$)			
Surge On-State Current	I_{TSM}	A	20 (10m sec, conduction, sine half-wave 1 cycle)			
$I^2 t$ Limit Value	$I^2 t$	$\text{A}^2 \text{sec}$	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	$\text{A}/\mu\text{s}$	20 (forward voltage immediately before turn-on= $0.5 \times V_{DRM}$)			
Junction Temperature	T_j	$^\circ\text{C}$	$-40 \sim +110$			
Storage Temperature	T_{stg}	$^\circ\text{C}$	$-40 \sim +110$			
Weight		g	1.5			

Condition: $R_{GK} = 1\text{k}\Omega$

■ CHARACTERISTICS

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

Condition: $R_{GK} = 1\text{k}\Omega$

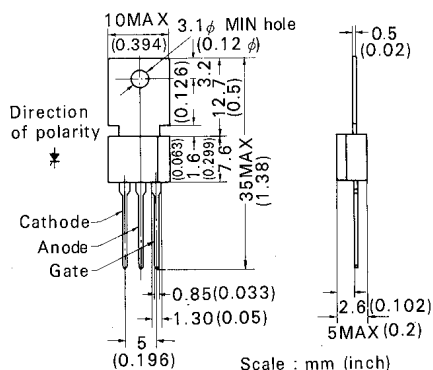


Fig. 1 OUTLINE DRAWING

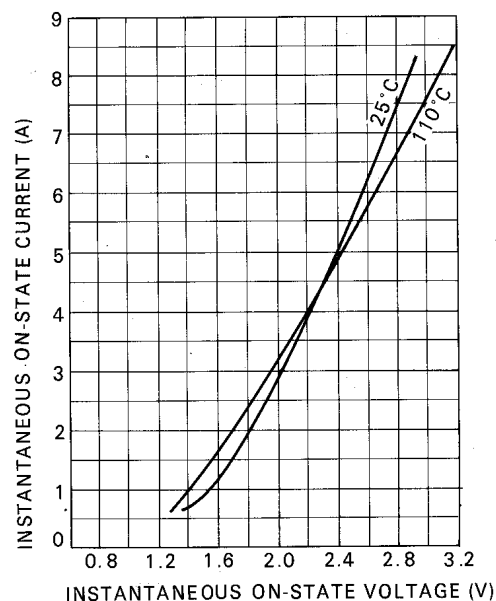


Fig. 2 MAX. FORWARD CHARACTERISTICS