

SCR Thyristor

03P2J/03P4J/03P5J

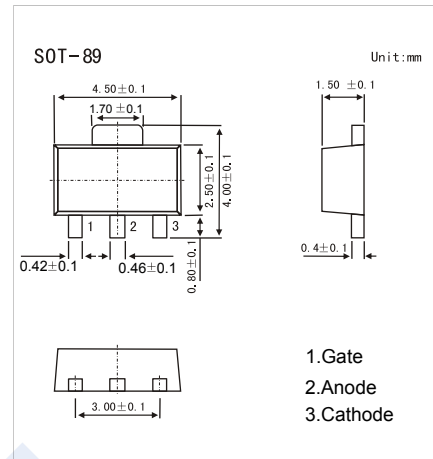
■ Features

- High Anode to Cathode Voltage

$V_{DRM}, V_{RRM}=200V(03P2J)$

$V_{DRM}, V_{RRM}=400V(03P4J)$

$V_{DRM}, V_{RRM}=500V(03P5J)$



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	03P2J	03P4J	03P5J	Unit
Repetitive Peak Reverse Voltages @ I _{RRM} =100uA	V _{RRM}	200	400	500	
Repetitive Peak Off-State Voltages @ I _{DRM} =100uA	V _{DRM}	200	400	500	
Average on-state Current (Ta = 77℃Single phase half wave)	I _{T(AV)}	0.3			A
Forward Current RMS	I _{T(RMS)}	0.47			
Non-Repetitive Peak on-state Current (f=50Hz,1cycle)	I _{TSM}	6			
Circuit Fusing Considerations (1ms≤ t ≤10ms)	I ² t	0.15			A ² s
Peak Gate Current — Forward (f≥50Hz,duty≤10%)	I _{GFM}	0.1			A
Peak Gate Voltage — Reverse	V _{GRM}	6			V
Peak Gate Power — Forward (f≥50Hz,duty≤10%)	P _{GM}	100			mW
Average Gate Power — Forward	P _{GF(AV)}	10			
Thermal Resistance Junction to Ambient	R _{th(j-a)}	65			℃/W
Junction Temperature	T _J	125			℃
Storage Temperature Range	T _{stg}	-55 to 150			

■ Electrical Characteristics ($T_a = 25^\circ C$, unless otherwise noted.)

Parameter	Symbol	Test Conditions	Min	Typ.	Max	Unit
Gate Non-Trigger Voltage	V_{GD}	$V_{DM}=1/2V_{DRM}, T_J = 125^\circ C$	0.1			V
Off-state Leakage Current	$I_{D,IR}$	$V_{DRM}=V_{RRM}, R_{GK}=1K\Omega, T_J=25^\circ C;$			10	μA
		$V_{DRM}=V_{RRM}, T_J=125^\circ C;$			100	
On-state Voltage	V_{TM}	$I_T=1A$			1.6	V
Gate Trigger Voltage	V_{GT}	$V_{DM}=6V, R_L=100\Omega$			0.8	
Gate Trigger Current (Continuous dc)	I_{GT}	$V_{DM}=6V, R_L=100\Omega$			200	μA
Holding Current	I_H	$V_D=12V, I_T=1A$			5	mA
Critical Rate of rise of off-state Voltage	dV/dt	$V_{DM}=2/3V_{DRM}, T_J=125^\circ C$		40		V/us
Circuit Commutated turn-off time	t_q	$V_D=2/3V_{DRM}, T_J=125^\circ C, T_M=200mA;$ $V_R \geq 25V, dI_{TM}/dt=15A/us, dV_D/dt=20V/us;$		25		μS

■ Marking

NO	03P2J	03P4J	03P5J
Marking	03P2J	03P4J	03P5J

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■ Typical Characteristics

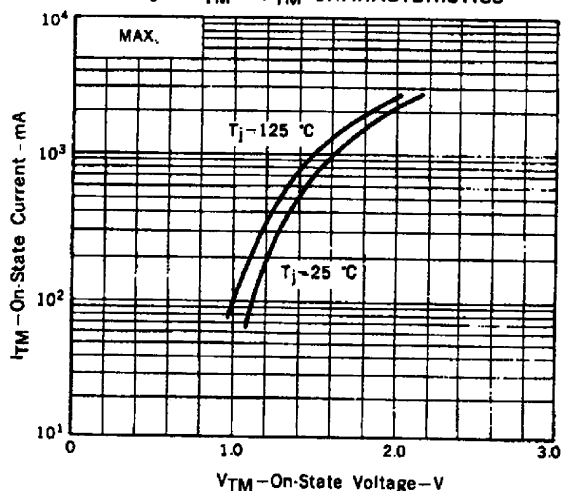
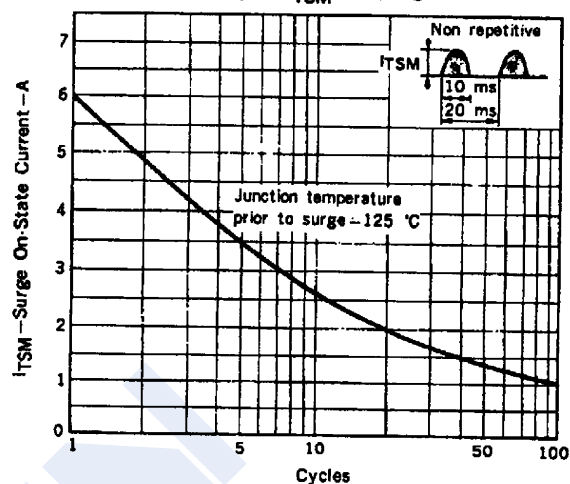
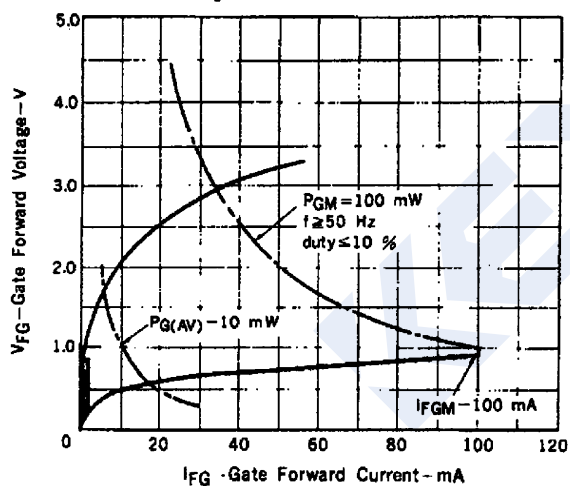
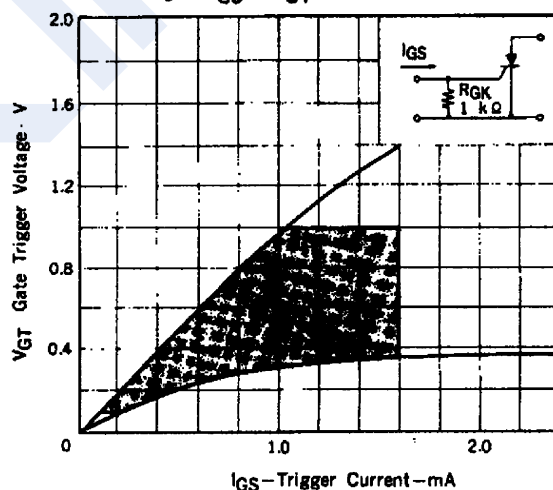
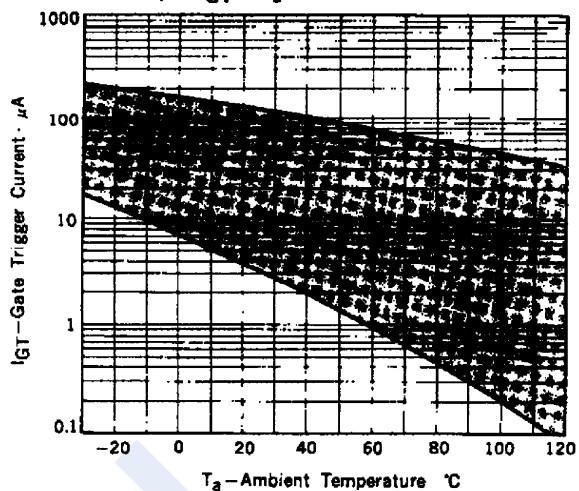
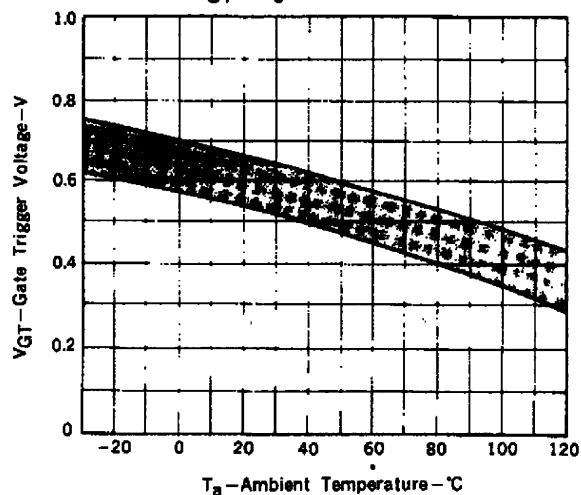
Fig. 1 $I_{TM} - V_{TM}$ CHARACTERISTICSFig. 2 I_{TSM} RATING

Fig. 3 GATE POWER RATINGS

Fig. 4 $I_{GS} - V_{GT}$ DISTRIBUTIONFig. 5 $I_{GT} - T_a$ TYPICAL DISTRIBUTIONFig. 6 $V_{GT} - T_a$ TYPICAL DISTRIBUTION

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■ Typical Characteristics

