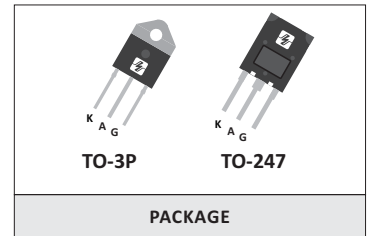
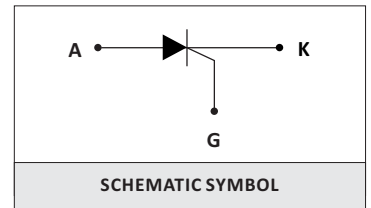


DESCRIPTION

The 40TPS Series SCR is suitable to fit modes of control found in applications such as voltage regulation circuits for motorbikes, over-voltage crowbar protection, motor control circuits in power tools and kitchen aids, inrush current limiting circuits, capacitive discharge ignition. The insulated fullpack package allows a back to back configuration.

FEATURES

- Repetitive Peak Off-State Voltage : 800/1200/1600V
- R.M.S On-State Current ($I_{T(RMS)}$)= 55 A)
- Low On-State Voltage (1.8V(Max.)@ I_{TM})
- RoHS Compliant
- Reach Compliant



ABSOLUTE MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED)

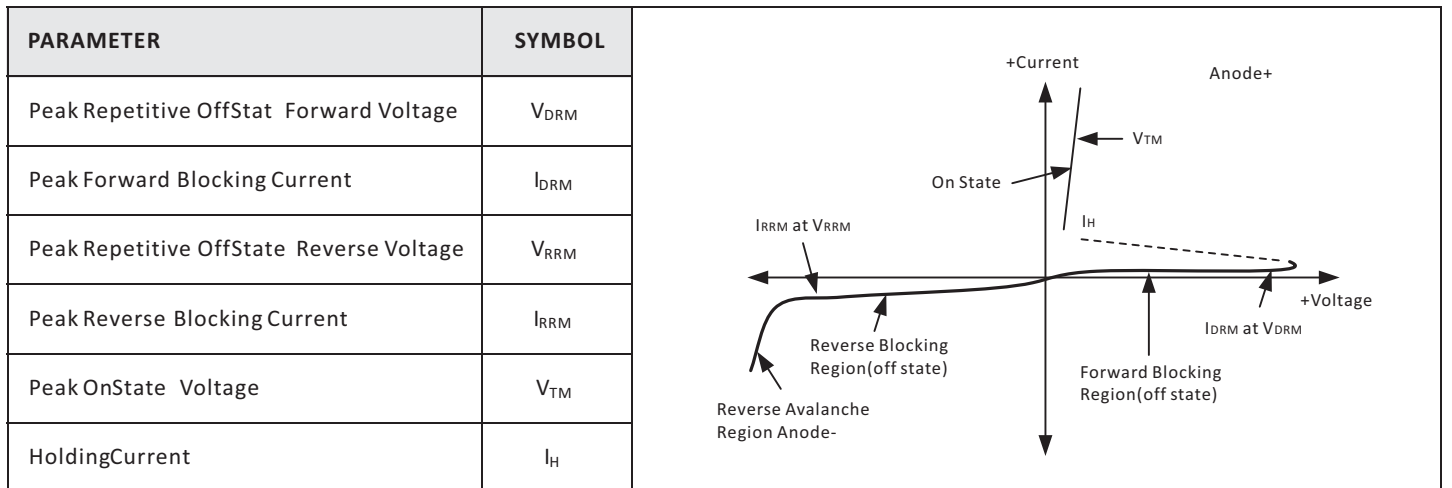
Symbol	Parameter		Value			Unit
			40TPS08	40TPS12	40TPS16	
V_{DRM}	Repetitive Peak off -State Voltage		800	1200	1600	V
V_{RRM}	Repetitive Peak Reverse Voltage		800	1200	1600	V
$I_{T(RMS)}$	RMS on-state current	$T_c=109^\circ\text{C}$	55			A
$I_{T(AV)}$	Average on-state current	$T_c=109^\circ\text{C}$	40			A
I_{TSM}	Non repetitive surge peak on-state current	$tp=8.3\text{mS}$	520			A
		$tp=10\text{mS}$				
I^2t	I^2t Value for fusing	$tp=10\text{mS}$	$T_j=25^\circ\text{C}$	1350		A^2S
di/dt	Critical rate of rise of on-state current $I_G = 2 \times I_{GT}$	$F=60\text{Hz}$	$T_j=125^\circ\text{C}$	150		$\text{A}/\mu\text{S}$
I_{GM}	Peak gate current	$tp=20\mu\text{S}$	$T_j=125^\circ\text{C}$	1.5		A
$P_{G(AV)}$	Average gate power dissipation	$T_j=125^\circ\text{C}$		2.0		W
T_{STG}	Storage junction temperature range		-40~150			$^\circ\text{C}$
T_J	Operating junction temperature range		-40~125			$^\circ\text{C}$



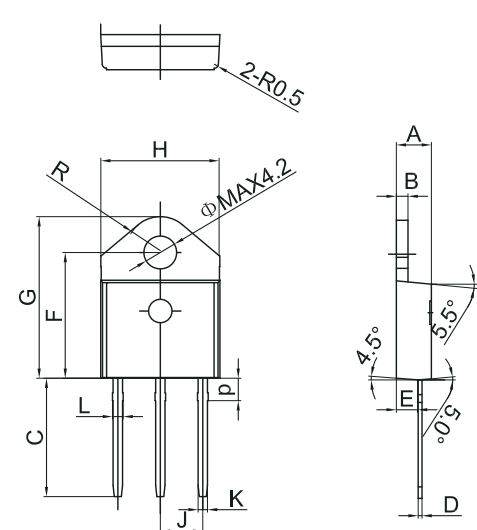
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ C$ UNLESS OTHERWISE NOTED)

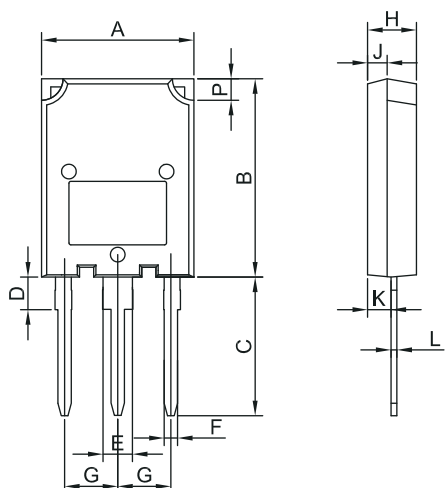
Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_{GT}	$V_D = 12 V R_L = 30\Omega$		3	-	50	mA
V_{GT}			-	-	1.5	V
V_{GD}	$V_D = V_{DRM} R_{GK} = 1.0k\Omega$	$T_j = 125^\circ C$	0.25	-	-	V
I_H	$I_T = 1.0A$		-	-	80	mA
I_L	$I_G = 1.2 I_{GT}$		-	-	100	mA
dv/dt	$V_D = 67\% V_{DRM}$ Gate open	$T_j = 125^\circ C$	1000	-	-	V/ μs
V_{TM}	$I_{TM} = 80 A t_p = 380 \mu s$		-	-	1.8	V
I_{DRM}	$V_D = V_{DRM} V_R = V_{RRM}$		-	-	10	μA
I_{RRM}			$T_j = 125^\circ C$	-	-	5.0

VOLTAGE CURRENT CHARACTERISTIC OF SCR



PACKAGE MECHANICAL DATA

TO-3P	Symbol	Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	4.40	4.60	0.173	0.181
	B	1.45	1.55	0.057	0.061
	C	14.35	15.60	0.565	0.614
	D	0.50	0.75	0.020	0.028
	E	2.70	2.90	0.106	0.114
	F	15.80	16.50	0.622	0.650
	G	20.40	21.10	0.815	0.831
	H	15.10	15.50	0.594	0.610
	J	5.40	5.65	0.213	0.222
	K	1.20	1.40	0.047	0.055
	L	1.35	1.50	0.053	0.059
	P	2.80	3.00	0.110	0.118
	R	4.60TYP		0.181TYP	

TO-247	Symbol	Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	15.10	16.10	0.595	0.632
	B	19.80	20.80	0.780	0.818
	C	13.80	14.80	0.544	0.582
	D	3.00	4.00	0.118	0.157
	E	2.75	3.35	0.108	0.132
	F	1.30	1.50	0.051	0.059
	G	5.10	5.80	0.201	0.228
	H	4.50	5.50	0.178	0.216
	J	1.45	2.15	0.058	0.084
	K	1.90	2.80	0.075	0.110
	L	0.55	0.80	0.022	0.032
	P	2.00	2.40	0.079	0.095



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