

isc Thyristors

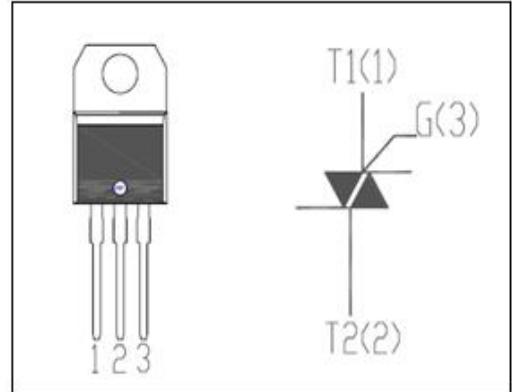
Q6025R5

DESCRIPTION

- With TO-220 packaging
- Operating in 3 quadrants
- High commutation capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Solid state relays; heating and cooking appliances
- Switching applications



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	MAX	UNIT
V_{DRM}	Repetitive peak off-state voltage	600	V
V_{RRM}	Repetitive peak reverse voltage	600	V
$I_{\text{T(RSM)}}$	Average on-state current @ $T_c=110^{\circ}\text{C}$	25	A
I_{TSM}	Surge non-repetitive on-state current	167 200	A
$P_{\text{G(AV)}}$	Average gate power dissipation (over any 20 ms period)	0.5	W
T_j	Operating junction temperature	-40~150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-40~150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_c=25^{\circ}\text{C}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{RRM}	Repetitive peak reverse current	$V_R=V_{\text{RRM}}$ Rated; $V_D=V_{\text{DRM}}$ Rated;		0.1	mA
I_{DRM}	Repetitive peak off-state current			3.0	
V_{TM}	On-state voltage	$I_T=25\text{A}$		1.8	V
I_{GT}	Gate-trigger current	$V_D=12\text{V}; R_G=330\ \Omega;$ $R_L=6\ \Omega$	I	50	mA
			II	50	
			III	50	
V_{GT}	Gate-trigger voltage	$V_D=12\text{V}; R_G=330\ \Omega; R_L=6\ \Omega$		2.5	V
$R_{\text{th (j-c)}}$	Junction to case	Half cycle		0.89	$^{\circ}\text{C}/\text{W}$

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