

## isc Thyristors

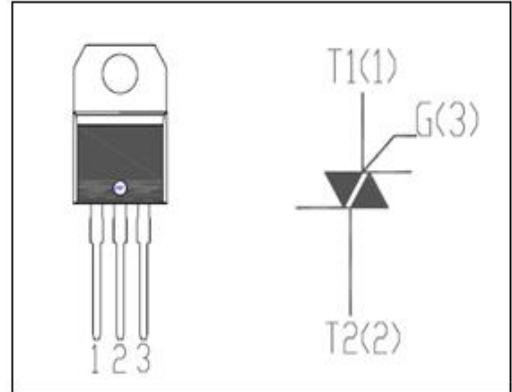
## Q6025R5

### 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
$V_{\text{DRM}}$	Repetitive peak off-state voltage	600	V
$V_{\text{RRM}}$	Repetitive peak reverse voltage	600	V
$I_{\text{T(RSM)}}$	Average on-state current @ $T_c=110^\circ\text{C}$	25	A
$I_{\text{TSM}}$	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	$^\circ\text{C}$
$T_{\text{stg}}$	Storage temperature	-40~150	$^\circ\text{C}$

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$I_{\text{RRM}}$	Repetitive peak reverse current	$V_R=V_{\text{RRM}}$ Rated; $V_D=V_{\text{DRM}}$ Rated;		0.1	mA
$I_{\text{DRM}}$	Repetitive peak off-state current			1.0 3.0	
$V_{\text{TM}}$	On-state voltage	$I_T=25\text{A}$		1.8	V
$I_{\text{GT}}$	Gate-trigger current	$V_D=12\text{V}; R_G=330\ \Omega$ ; $R_L=6\ \Omega$	I	50	mA
			II	50	
			III	50	
$V_{\text{GT}}$	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	$^\circ\text{C/W}$

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