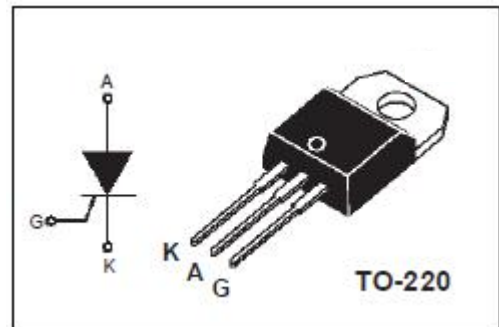


## isc Thyristors

## MCR8SDG

### DESCRIPTION

- With TO-220 packaging
- High surge capability
- Glass passivated junctions and center gate fire for greater parameter uniformity and stability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



### APPLICATIONS

- Switching applications

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

SYMBOL	PARAMETER	MIN	UNIT
$V_{\text{DRM}}$	Repetitive peak off-state voltage	400	V
$V_{\text{RRM}}$	Repetitive peak reverse voltage	400	V
$I_{\text{T(RMS)}}$	RMS on-state current @ $T_c=80^{\circ}\text{C}$	8	A
$I_{\text{TSM}}$	Surge non-repetitive on-state current ( 1/2 cycle, sine wave; $T_j=110^{\circ}\text{C}$ )	80	A
$P_{\text{G(AV)}}$	Average gate power dissipation	0.5	W
$T_j$	Operating junction temperature	-40~110	$^{\circ}\text{C}$
$T_{\text{stg}}$	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	$V_{\text{RM}}=V_{\text{RRM}}$ $T_j=25^{\circ}\text{C}$		0.01	mA
$I_{\text{DRM}}$	Repetitive peak off-state current	$V_{\text{DM}}=V_{\text{DRM}}$ $T_j=110^{\circ}\text{C}$		0.5	mA
$V_{\text{TM}}$	On-state voltage	$I_{\text{TM}}=16\text{A}$		1.8	V
$I_{\text{GT}}$	Gate-trigger current	$V_{\text{D}}=12\text{V}$ ; $R_{\text{L}}=100\ \Omega$		0.2	mA
$V_{\text{GT}}$	Gate-trigger voltage	$V_{\text{D}}=12\text{V}$ ; $R_{\text{L}}=100\ \Omega$		1.0	V
$R_{\text{th(j-c)}}$	Thermal resistance	Junction to case		2.2	$^{\circ}\text{C/W}$

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