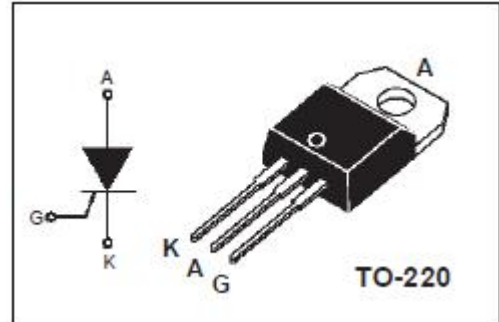


**isc Thyristors**
**2N6509G**
**APPLICATIONS**

- It is suitable to fit all modes of control found in applications such as overvoltage crowbar protection, motor control circuits in power tools and kitchen aids, in-rush current limiting circuits, capacitive discharge ignition, voltage regulation circuits etc.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


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

SYMBOL	PARAMETER	MIN	UNIT
$V_{\text{DRM}}$	Repetitive peak off-state voltage	800	V
$V_{\text{RRM}}$	Repetitive peak reverse voltage	800	V
$I_{\text{T(AV)}}$	Average on-state current	16	A
$I_{\text{T(RMS)}}$	RMS on-state current	25	A
$I_{\text{TSM}}$	Surge non-repetitive on-state current	250	A
$P_{\text{G(AV)}}$	Average gate power dissipation	0.5	W
$T_j$	Operating junction temperature	-40~125	$^{\circ}\text{C}$
$T_{\text{stg}}$	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	$V_{\text{RM}}=V_{\text{RRM}}, R_{\text{GK}}=220\ \Omega$	$T_j=25^{\circ}\text{C}$	10	$\mu\text{A}$
			$T_j=125^{\circ}\text{C}$	2	mA
$I_{\text{DRM}}$	Repetitive peak off-state current	$V_{\text{DM}}=V_{\text{DRM}}, R_{\text{GK}}=220\ \Omega$	$T_j=25^{\circ}\text{C}$	10	$\mu\text{A}$
			$T_j=125^{\circ}\text{C}$	2	mA
$V_{\text{TM}}$	On-state voltage	$I_{\text{TM}}=50\text{A}$		1.8	V
$I_{\text{GT}}$	Gate-trigger current	$V_{\text{D}}=12\text{V}; R_{\text{L}}=100\ \Omega$		30	mA
$V_{\text{GT}}$	Gate-trigger voltage	$V_{\text{D}}=12\text{V}; R_{\text{L}}=100\ \Omega$		1.5	V
$R_{\text{th(j-c)}}$	Thermal resistance	Junction to case		1.5	$^{\circ}\text{C}/\text{W}$

**NOTICE:**

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