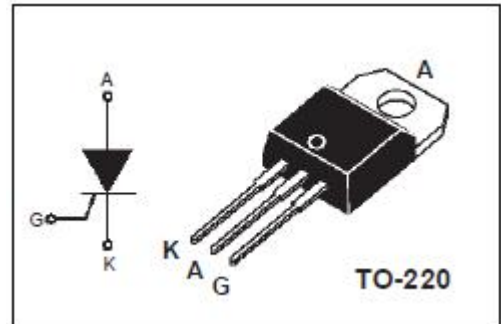


## isc Thyristors

2N6509

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

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