

TO-220AB Plastic-Encapsulate Thyristors

BT138 TRIAC

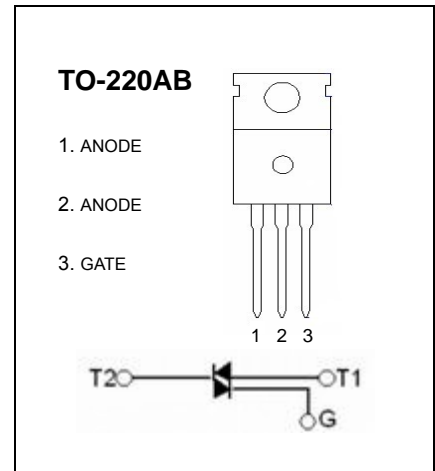
MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	12	A
V_{DRM}/V_{RRM}	600	V
I_{TSM}	25	A

GENERAL DESCRIPTION

Glass passivated triacs in a plastic envelope , intended for use in applications requiring high bidirectional transient and blocking voltage capability and high thermal cycling performance.

.Typical applications include motor control, industrial and domestic lighting , heating and static switching.



ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

symbol	parameter			value	unit
$I_{T(RMS)}$	RMS on-state current (full sine wave)	D ² PAK/TO-220	T _C =107°C	12	A
I_{TSM}	Non repetitive surge peak on-state current (full sine wave, T _j =25°C)		t=20ms	25	A
			t=16.7ms	27	
I_{GM}	Peak gate current			2	A
$P_{G(AV)}$	Average gate power dissipation		T _j =125°C	0.5	W
T _{stg}	Storage junction temperature range			-40 to +150	°C
T _j	Operating junction temperature range			-40 to +125	

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Rated repetitive peak off-state/reverse voltage		V_{DRM}, V_{RRM}	$I_D=10\mu A$	600		V
Rated repetitive peak off-state current		I_{DRM}, I_{RRM}	$V_D=620V$		10	μA
On-state voltage		V_{TM}	$I_T=5A$		1.7	V
Gate trigger current	I	I_{GT}	T ₂ (+), G(+)	$V_D=12V$ $R_L=100\Omega$	10	mA
	II		T ₂ (+), G(-)		10	mA
	III		T ₂ (-), G(-)		10	mA
	IV		T ₂ (-), G(+)		-	mA
Gate trigger voltage	I	V_{GT}	T ₂ (+), G(+)	$V_D=12V$ $R_L=100\Omega$	1.45	V
	II		T ₂ (+), G(-)		1.45	V
	III		T ₂ (-), G(-)		1.45	V
	IV		T ₂ (-), G(+)		-	V
Holding current		I_H	$I_T=100mA$ $I_G=20mA$		20	mA