

TRIAC

BT138S

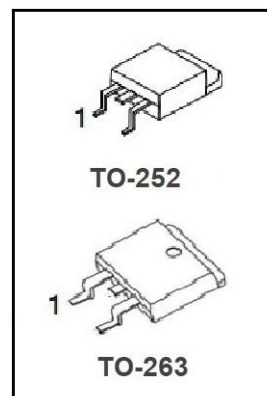
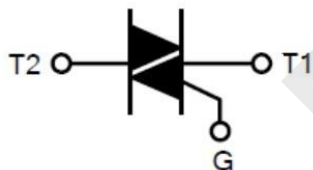
FEATURES

This device of sensitive TRIAC product is a glass passivated device, has a low gate trigger current, high stability in gate trigger current to variation of operating temperature and high off state voltage.

APPLICATIONS

This device is suitable for low power AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

SYMBOL:



Package	Pin assignment		
	1	2	3
TO-252	T1	T2	G
TO-263	T1	T2	G

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE		UNIT
Repetitive Peak Off-State Voltages	V_{DRM}, V_{RRM}	BT138S-600(D/E/F)	600	V
		BT138S-800(D/E/F)	800	
RMS on-State Current	$I_{T(RMS)}$	12		A
Non-Repetitive Peak On-State Current	I_{TSM}	120		A
I^2t for fusing	I^2t	78		A ² s
Repetitive rate of rise of on-state current after triggering	dI_T/dt	I-IV	50	A/uS
Peak gate current	I_{GM}	4		A
Peak Gate Power	P_{GM}	5		W
Average Gate Power	$P_{G(AV)}$	1		W
Operating junction temperature	T_J	-40~+125		°C
Storage Temperature	T_{STG}	-40 ~ +150		°C

ELECTRICAL CHARACTERISTICS (T_J=25°C)

Parameter	Symbol	Test Conditions		MIN	MAX			Units
					D	E	F	
Peak Repetitive Forward or Reverse Blocking Current	I _{DRM} I _{RRM}	V _{AK} = Rated V _{DRM} or V _{RRM} ;			5			uA
Gate Trigger Current	I _{GT}	V _D =12V, R _L =100Ω	I		5	10	25	mA
			II		5	10	25	
			III		5	10	25	
			IV		10	25	50	
Gate Trigger Voltage	V _{GT}	V _D =12V, R _L =100Ω			1.3			V
Gate Non-Trigger Voltage	V _{GD}	V _D = V _{DRM} , R _L = 33 kΩ, T _j = 125 °C		0.2				V
Peak Forward On-State Voltage	V _{TM}	I _T =15A,			1.6			V
Latch Current	I _L	I _G =1.2I _{GT}	I		10	20	40	mA
			II		20	40	80	
			III		10	20	40	
			IV		10	20	40	
Holding Current	I _H	I _T =0.1A			10	15	35	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	V _D =67%V _{DRM} , T _J =25°C, Gate open		40				V/μs