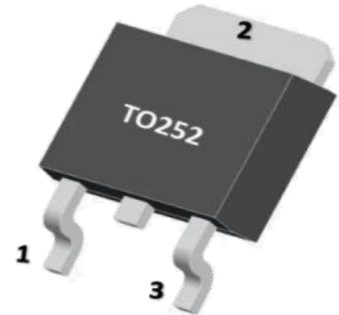


BT137S-800

TRIAC

■ GENERAL DESCRIPTION

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.



■ MARKING



BT137S-800=DeviceCod

800E: $V_{DRM}/V_{RRM}=800V$

XXX=Date Code

Solid Dot=Green molding compound

■ ABSOLUTE MAXIMUM RATINGS (TC=25°C, unless otherwise specified)

SYMBOL	PARAMETER		CONDITION	RATINGS	UNIT
V _{DRM}	Repetitive Peak Off State Voltage	BT137-800	T _j =25°C	800	V
I _{T(RMS)}	RMS On-State Current(full sine wave;T _{mb} <=102°C)			8	A
I _{TSM}	Non Repetitive Peak. On-State Current (full sine wave, T _j =25°C prior to surge))		t=20ms,F=50Hz	80	A
I ² t	I ² t For Fusing		t=10ms	30	A ² s
dI _T /dt	Repetitive Rate of Rise of On-state Current after Triggering I _{TM} =12A;I _G =0.2A,dI _G /dt=0.2A/μs		T2+ G+	50	A/μs
			T2+ G-	50	
			T2- :G-	50	
			T2- ::: G+	10	
I _{GM}	Peak Gate Current			4	A
P _{G(AV)}	Average Gate Power (Over any 20ms period)			1	W
P _{GM}	Peak Gate Power			5	W
T _{stg}	Storage Temperature			-40 to +150	°C
T _j	Operating junction temperature			125	°C

Notes:Although not recommended, off-state voltages up to 800V may be applied without damage, but the triac may switch to the on-state. The rate of rise of current should not exceed 6A/μs.

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■ ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise specified)

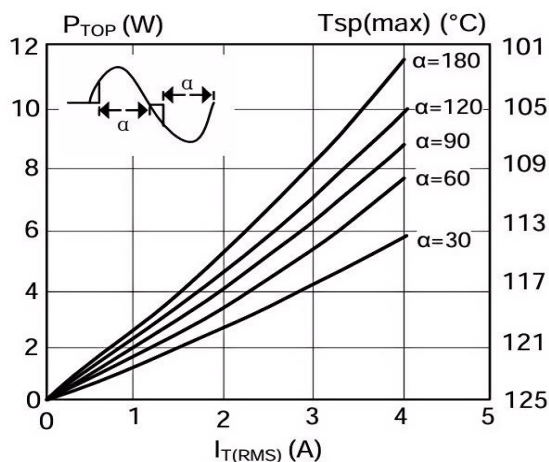
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STATIC CHARACTERISTICS						
On-State Voltage	V _T	I _T =10A		1.3	1.4	V
Gate trigger current	I _{GT}	T2+, G+	V _D =12V, I _T =0.1A	3	5	mA
		T2+, G-		3	5	mA
		T2-, G-		3	5	mA
		T2-, G+		8	15	mA
Latching Current	I _L	T2+, G+	V _D =12V, I _T =0.1A	5	10	mA
		T2+, G-		6	12	mA
		T2-, G-		5	10	mA
		T2-, G+		5	10	mA
Gate Trigger Voltage	V _{GT}	V _D =12V, I _T =0.1A		0.8	1.5	V
		V _D =400V, I _T =0.1A ; T _J =125°C	0.25	0.4		V
Holding Current	I _H	V _D =12V, I _{GT} =0.1A		5	20	mA
Off-state Leakage Current	I _D	V _D =V _{DRM} (max) , T _J =125°C		0.1	0.5	mA
DYNAMIC CHARACTERISTICS						
Critical Rate of Rise of off-state Voltage	dV _D /dt	V _{DM} =67%, V _{DRM} (max), T _J =125°C Exponential waveform, Gate open circuit	100	250		V/μs
Critical Rate of Change of commutating Voltage	dV _{com} /dt	V _{DM} =400V , T _J =95°C, I _T (RMS)=8A dI _{com} /dt =3.6A/ms Gate open circuit		20		V/μs
Gate Controlled Turn-on Time	t _{gt}	I _{TM} =12A, V _D =V _{DRM} (max), I _G =0.1A dI _G /dt=5A/μs		2		μs

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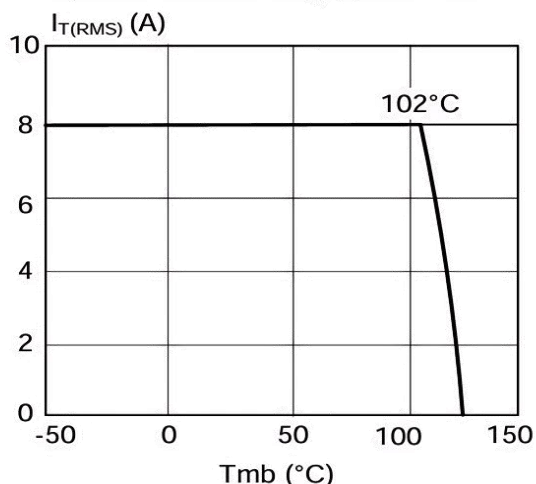
TRIAC

■ TYPICAL CHARACTERISTICS (1)

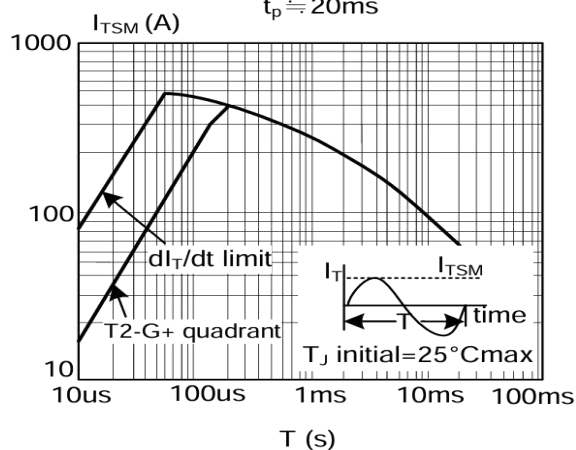
Maximum On -State Dissipation. P_{Tot} vs. RMS On-State Current, $I_{T(RMS)}$, Where α =conduction Angle



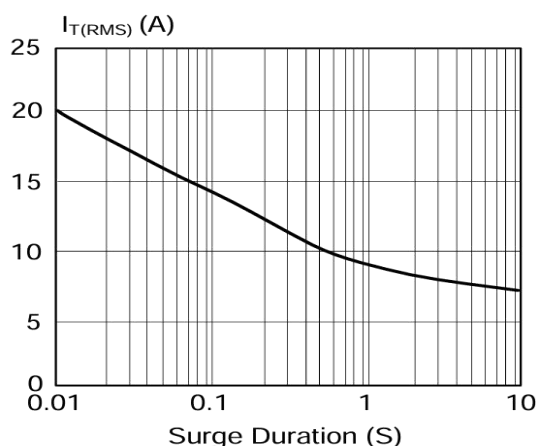
Maximum Permissible RMS Current $I_{T(RMS)}$ vs. Versus Heatsink Temperature T_{mb}



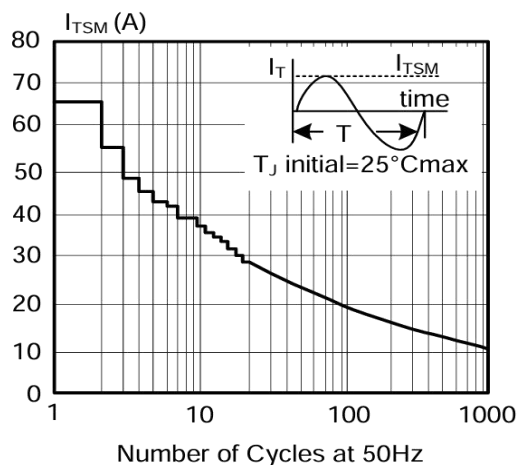
Maximum Permissible Non-Repetitive Peak On-State Current I_{TSM} vs. Pulse Width t_p , for Sinusoidal Currents, $t_p \approx 20ms$



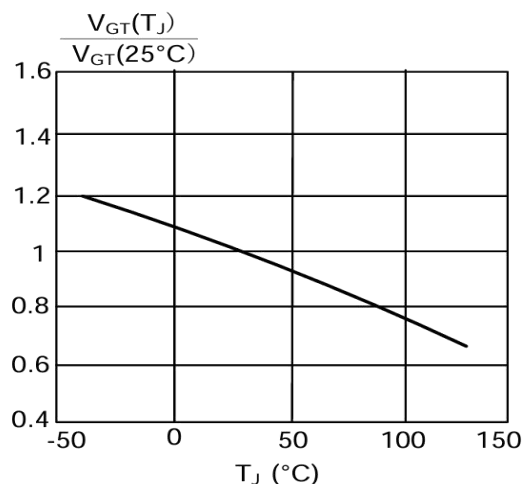
Maximum Permissible Repetitive RMS On-State Current $I_{T(RMS)}$ vs. Versus Surge Duration, for Sinusoidal Currents, $f=50Hz$, $T_{mb} \leq 102^\circ C$



Maximum Permissible Non-Repetitive Peak On-State Current I_{TSM} vs. Number of Cycles, for Sinusoidal Currents, $f=50Hz$



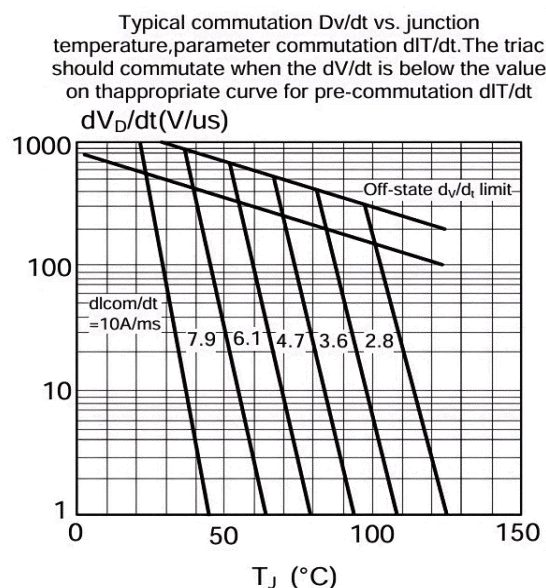
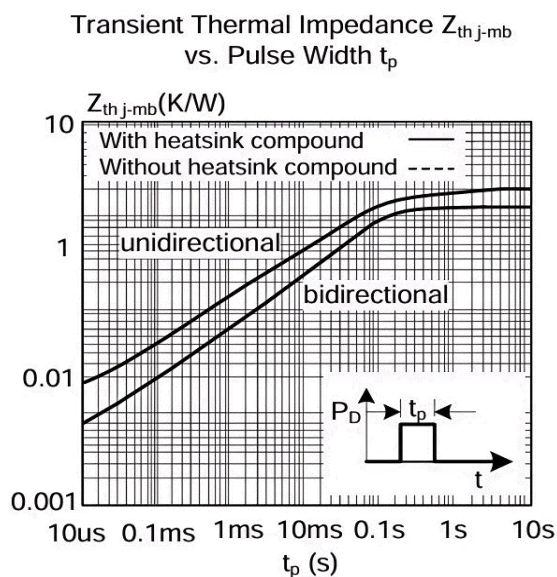
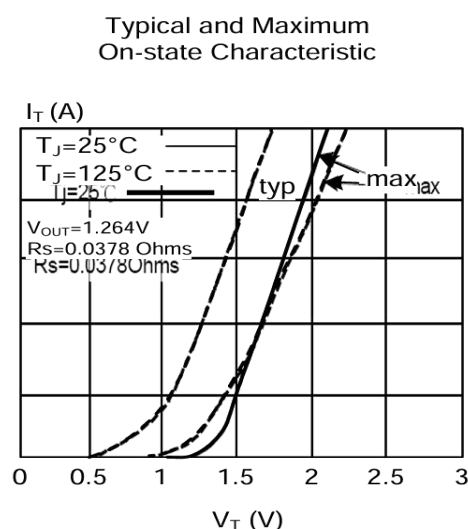
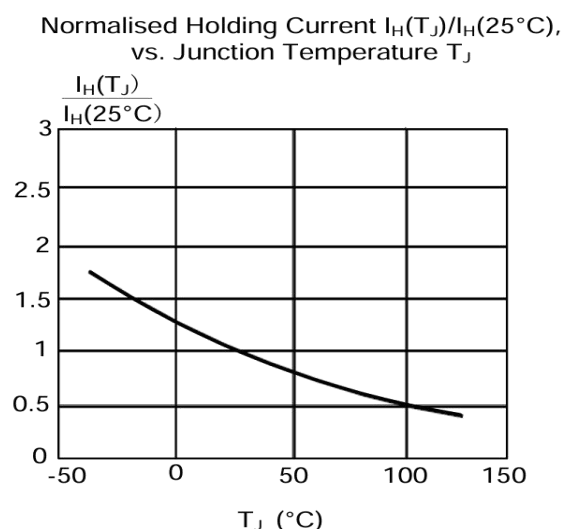
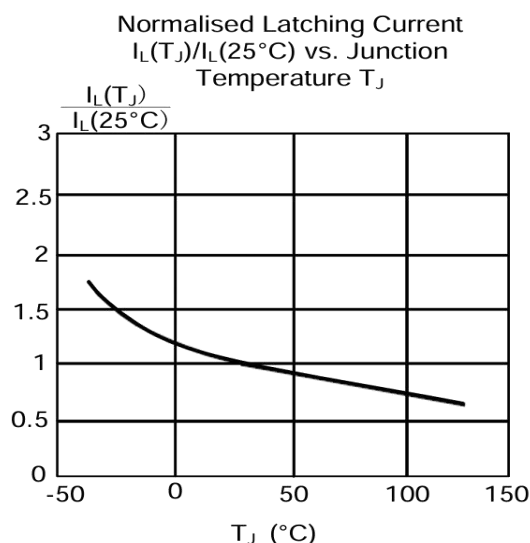
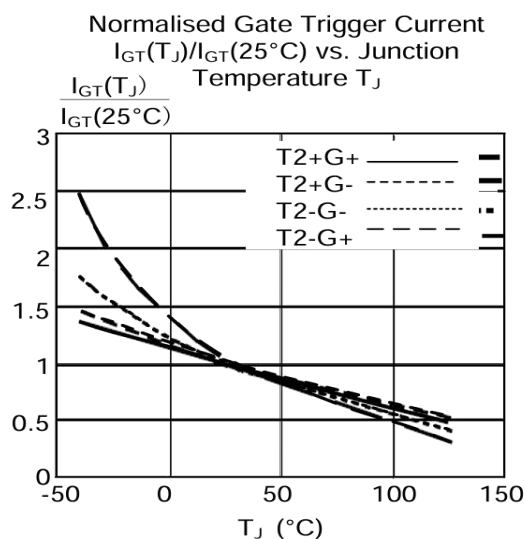
Normalised Gate Trigger Voltage $V_{GT}(T_J)/V_{GT}(25^\circ C)$ vs. Junction Temperature T_J



BT137S-800

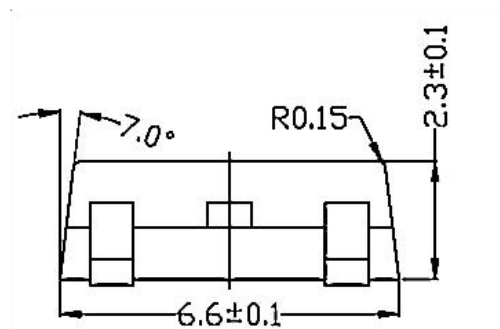
TRIAC

■ TYPICAL CHARACTERISTICS (2)





TRIAC



Package version	Reel dimensions $\phi \times H$ (mm)	Per Reel (pcs)	Reels per box	Inner box dimensions $L \times W \times H$ (mm)	Outer box (pcs)	Outer box dimensions $L \times W \times H$ (mm)
T0-252	$\phi 330 \times 20$	2500	2	360*340*50	25000	375*375*280