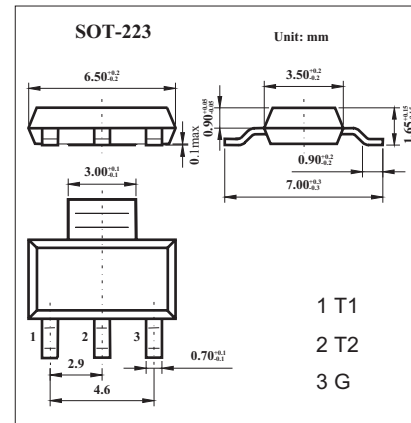
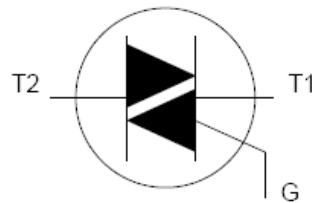


Triacs

BT134W Series

■ Features

- Repetitive peak off-state voltages : $V_{DRM}=500V\sim 800V$
- RMS on-state current : $I_{T(RMS)}=1A$
- Non-repetitive peak on-state current : $I_{TSM}=10A$



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	BT134W-500	BT134W-600	BT134W-800	Unit	
Repetitive peak off-state voltages	V_{DRM}		500	600	800	V	
RMS on-state current	$I_{T(RMS)}$	full sine wave; $T_{mb} \leq 108^\circ\text{C}$	1			A	
Non-repetitive peak on-state current	I_{TSM}	full sine wave; $T_j = 25^\circ\text{C}$ prior to surge				A	
		$t = 20\text{ ms}$ $t = 16.7\text{ ms}$	10 11			A	
I^2t for fusing	I^2t	$t = 10\text{ ms}$	0.5			A^2S	
Repetitive rate of rise of on-state current after triggering	di_T/dt	$I_{TM} = 1.5\text{ A}$; $I_G = 0.2\text{ A}$; $di_G/dt = 0.2\text{ A}/\mu\text{ s}$				A/ $\mu\text{ s}$	
			T2+ G+	50			A/ $\mu\text{ s}$
			T2+ G-	50			A/ $\mu\text{ s}$
			T2- G-	50			A/ $\mu\text{ s}$
			10			A/ $\mu\text{ s}$	
Peak gate current	I_{GM}		2			A	
Peak gate voltage	V_{GM}		5			V	
Peak gate power	P_{GM}		5			W	
Average gate power	$P_{G(AV)}$	over any 20 ms period	0.5			W	
Storage temperature	T_{stg}		-40 to 150			$^\circ\text{C}$	
Operating junction temperature	T_j		125			$^\circ\text{C}$	
Thermal resistance junction to solder point	$R_{th\ j-sp}$	full or half cycle	15			K/W	
Thermal resistance junction to ambient	$R_{th\ j-a}$	pcb mounted; minimum footprint	156			K/W	
		pcb mounted;	70			K/W	

BT134W Series

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min			Typ	Max			Unit
			... E	... F	... G		... E	... F	... G	
Gate trigger current	I _{GT}	V _D = 12 V; I _T = 0.1 A	T2+ G+			5	35	25	50	mA
			T2+ G-			8	35	25	50	mA
			T2- G-			11	35	25	50	mA
			T2- G+			30	70	70	100	mA
Latching current	I _L	V _D = 12 V; I _{GT} = 0.1 A	T2+ G+			7	20	20	30	mA
			T2+ G-			16	30	30	45	mA
			T2- G-			5	20	20	30	mA
			T2- G+			7	30	30	45	mA
Holding current	I _H	V _D = 12 V; I _{GT} = 0.1 A			5	15	15	30	mA	
On-state voltage	V _T	I _T = 2 A			1.2	1.5			V	
Gate trigger voltage	V _{GT}	V _D = 12 V; I _T = 0.1 A				0.7	1.5			V
		V _D = 400 V; I _T = 0.1 A	0.25			0.4				V
Off-state leakage current	I _D	V _D = V _{DRM(max)} ; T _j = 125°C			0.1	0.5			mA	
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	50	200	250				V/μs
Critical rate of change of commutating voltage	dV _{com} /dt	V _{DM} = 400 V; T _j = 95 °C ; I _{T(RMS)} = 1A; dI _{com} /dt = 1.8 A/ms; gate open circuit			10	50				V/μs
Gate controlled turn-on time	t _{gt}	I _{TM} = 1.5 A; V _D = V _{DRM(max)} ; I _G = 0.1 A; dI _G /dt = 5 A/μs;				2				μs

BT134W Series

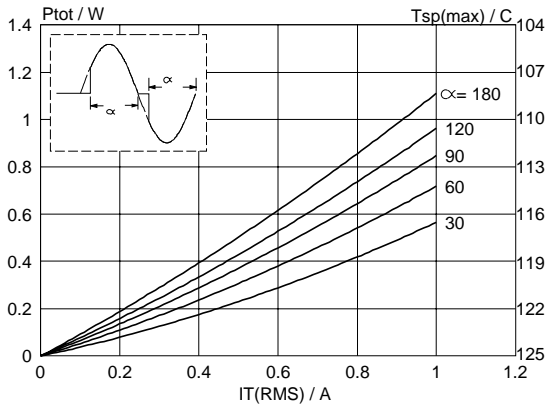


Fig.1. Maximum on-state dissipation, P_{tot} , versus rms on-state current, $I_{T(RMS)}$, where α = conduction angle.

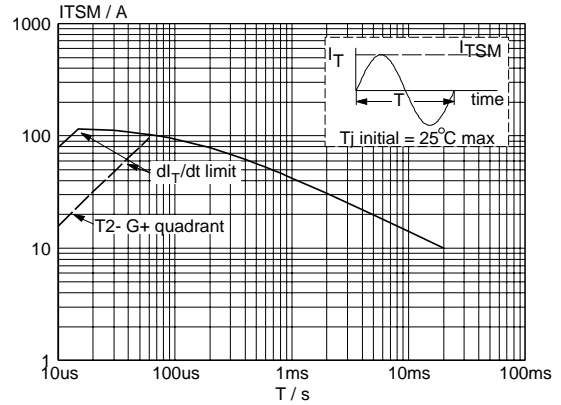


Fig.2. Maximum permissible non-repetitive peak on-state current I_{TSM} , versus pulse width t_p , for sinusoidal currents, $t_p \leq 20ms$.

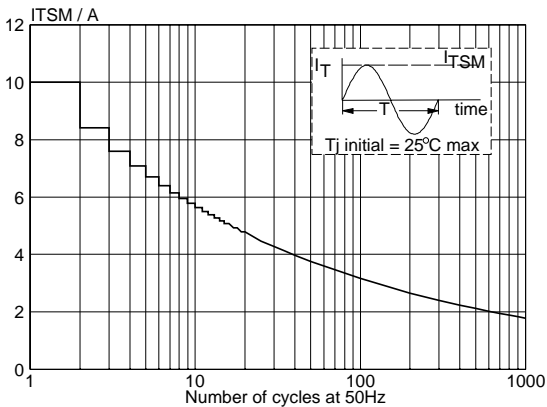


Fig.3. Maximum permissible non-repetitive peak on-state current I_{TSM} , versus number of cycles, for sinusoidal currents, $f = 50$ Hz.

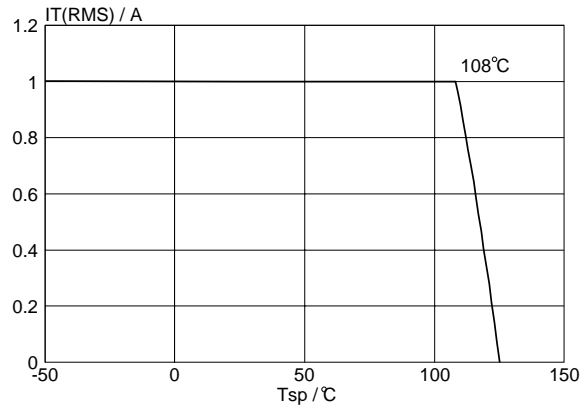


Fig.4. Maximum permissible rms current $I_{T(RMS)}$, versus solder point temperature T_{sp} .

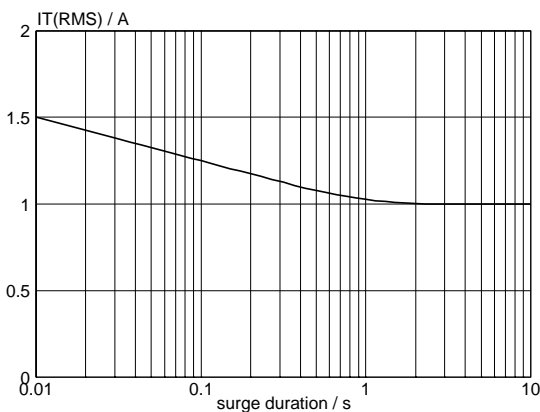


Fig.5. Maximum permissible repetitive rms on-state current $I_{T(RMS)}$, versus surge duration, for sinusoidal currents, $f = 50$ Hz; $T_{sp} \leq 108$ °C.

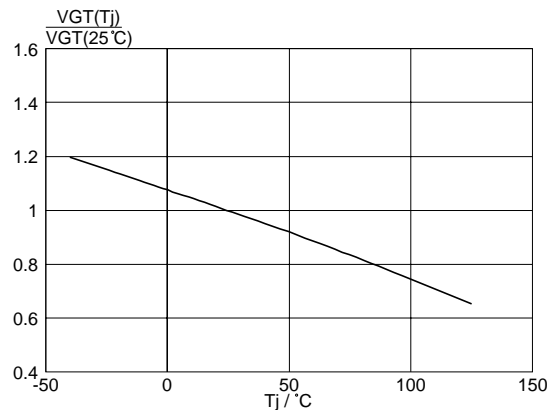


Fig.6. Normalised gate trigger voltage $V_{GT}(T_j) / V_{GT}(25$ °C), versus junction temperature T_j .

BT134W Series

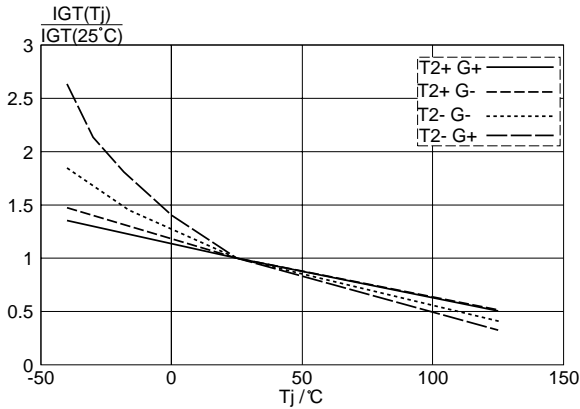


Fig. 7. Normalised gate trigger current $I_{GT}(T_j) / I_{GT}(25^\circ\text{C})$, versus junction temperature T_j .

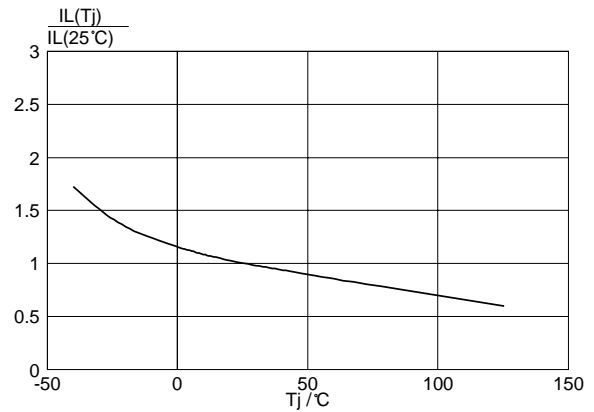


Fig. 8. Normalised latching current $I_L(T_j) / I_L(25^\circ\text{C})$, versus junction temperature T_j .

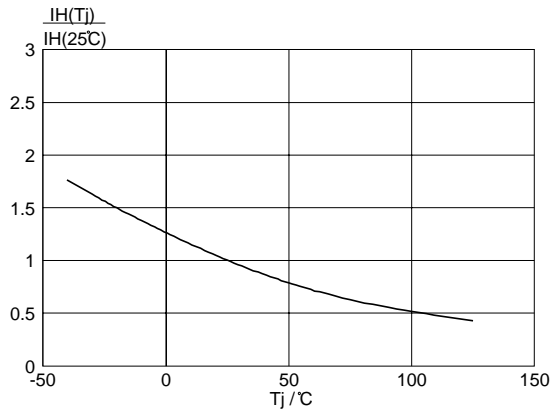


Fig. 9. Normalised holding current $I_H(T_j) / I_H(25^\circ\text{C})$, versus junction temperature T_j .

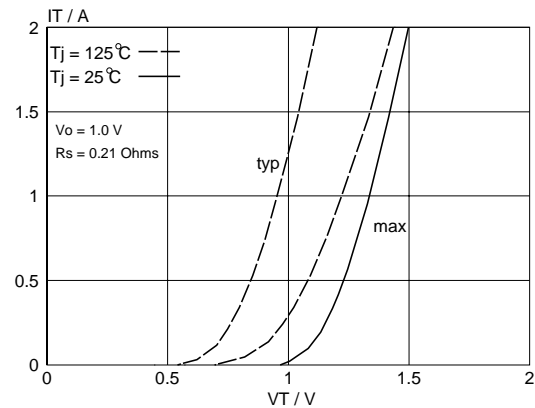


Fig. 10. Typical and maximum on-state characteristic.

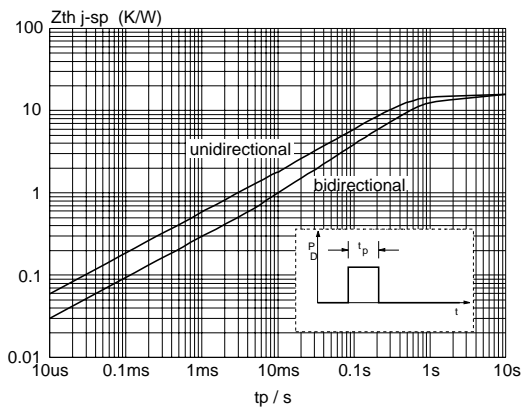


Fig. 11. Transient thermal impedance $Z_{th\ j-sp}$, versus pulse width t_p .

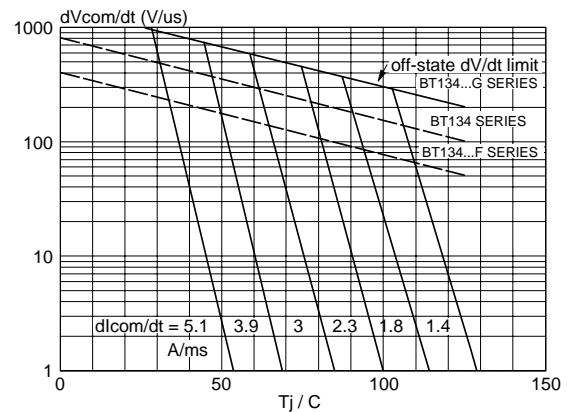


Fig. 12. Typical commutation dV/dt versus junction temperature, parameter commutation dI_T should commute when the dV/dt is below the value on the appropriate curve for pre-commutation dI_T/dt .