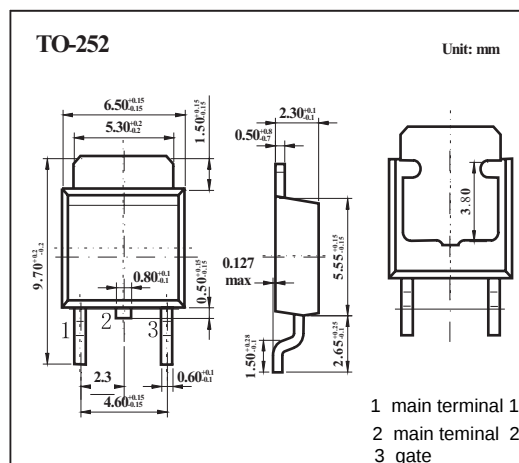
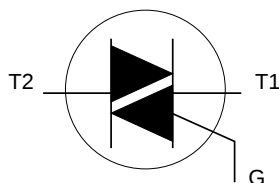


Triacs

BT136-500

■ Features

- Repetitive peak off-state voltages : $V_{DRM}=500V$
- RMS on-state current : $I_T(RMS)=4A$
- Non-repetitive peak on-state current : $I_{TSM}=25A$



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

Parameter	Symbol	Test conditions	Rating	Unit
Repetitive peak off-state voltages	V_{DRM}		500	V
RMS on-state current	$I_T(RMS)$	full sine wave; $T_{mb} \leq 107^\circ C$	4	A
Non-repetitive peak on-state current	I_{TSM}	full sine wave; $T_j = 25^\circ C$ prior to surge		
		$t = 20\text{ ms}$	25	A
		$t = 16.7\text{ ms}$	27	A
I^2t for fusing	I^2t	$t = 10\text{ ms}$	3.1	A^2S
Repetitive rate of rise of on-state current after triggering	dI/dt	$I_{TM} = 6\text{ A}; I_G = 0.2\text{ A}; dI_G/dt = 0.2\text{ A}/\mu s$		
		T2+ G+	50	$A/\mu s$
		T2+ G-	50	$A/\mu s$
		T2- G-	50	$A/\mu s$
		T2- G+	10	$A/\mu s$
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	$^\circ C$
Operating junction temperature	T_j		125	$^\circ C$
Thermal resistance junction to mounting base	$R_{th\ j-mb}$	full cycle	3.0	K/W
		half cycle	3.7	K/W
Thermal resistance junction to ambient	$R_{th\ j-a}$	in free air	60	K/W

BT136-500

■ 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				5	35	25	50	mA
						8	35	25	50	mA
						11	35	25	50	mA
						30	70	70	100	mA
Latching current	I _L	V _D = 12 V; I _{GT} = 0.1 A				7	20	20	30	mA
						16	30	30	45	mA
						5	20	20	30	mA
						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 = 5 A				1.4	1.70			V
Gate trigger voltage	V _{GT}	V _D = 12 V; I _T = 0.1 A	0.25			0.7	1.5			V
		V _D = 400 V; I _T = 0.1 A; T _j = 125°C				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)} = 4 A; dI _{com} /dt = 1.8 A/ms; gate open circuit			10	50				V/μs
Gate controlled turn-on time	t _{gt}	I _{TM} = 6 A; V _D = V _{DRM(max)} ; I _G = 0.1 A; dI _G /dt = 5 A/μs;				2				μs