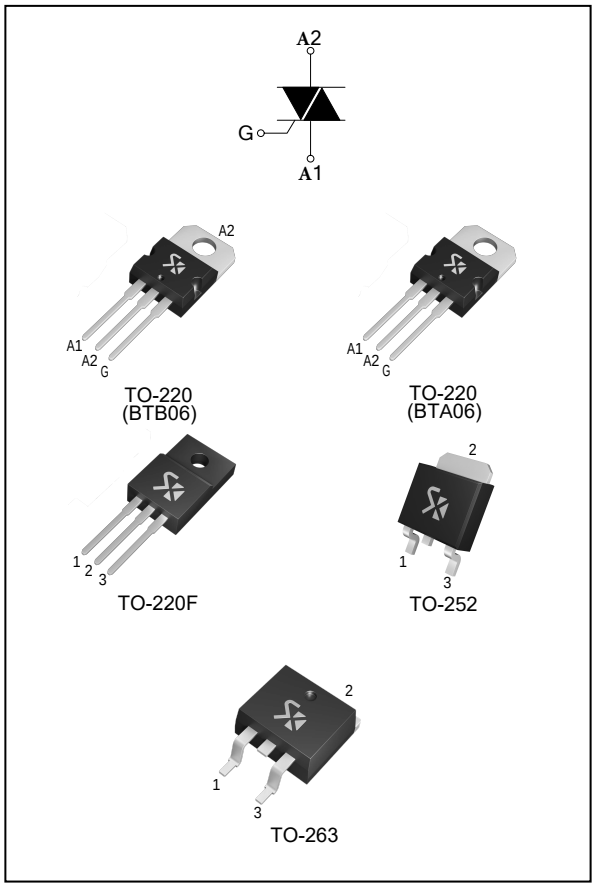
BT137 Triac

■ DESCRIPTION

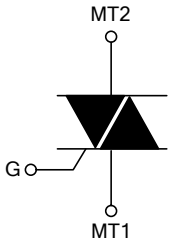
The BT137 is a siliconbidirectional device with NPNPN five-layer structure; Single-sided grooving technology with independent intellectual property rights, countertop glass passivation process; Multilayer metallized electrode on the back; It has high blocking voltage and high temperature stability;

The BT137 is widely used in dimming, temperature regulation, speed regulation, and electric vehicles Tools, solid state relays, vacuum cleaners, motor controls
system and other fields, strong anti-interference ability.



■ FEATURES

* Low gate trigger current
* Low holding current



■ ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER			RATINGS	UNIT
$I_{T(RMS)}$	RMS On-State Current	BTA BTB	Tc=80℃ Tc=90℃	8	A
I_{TSM}	Non Repetitive Surge Peak On-State Current	F=50HZ	t=20ms	80	A
I^2t	I^2t Value	tp=10ms		64	A^2S
di/dt	Critical Rate of Rise of On-State Current		Tj=125℃	50	A/us
V_{DRM}/V_{RRM}	Repetitive Peak Off-State Voltage		Tj=25℃	600/800	V

I_{GM}	Peak Gate Current	tp=20us	Tj=125℃	4	A
$P_{G(AV)}$	Average Gate Power Dissipation		Tj=125℃	1	W
Tstg Tj	Storage Junction Temperature Operating Junction Temperature			−40to+150 −40to+125	℃

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ Electrical characteristics (three quadrants)

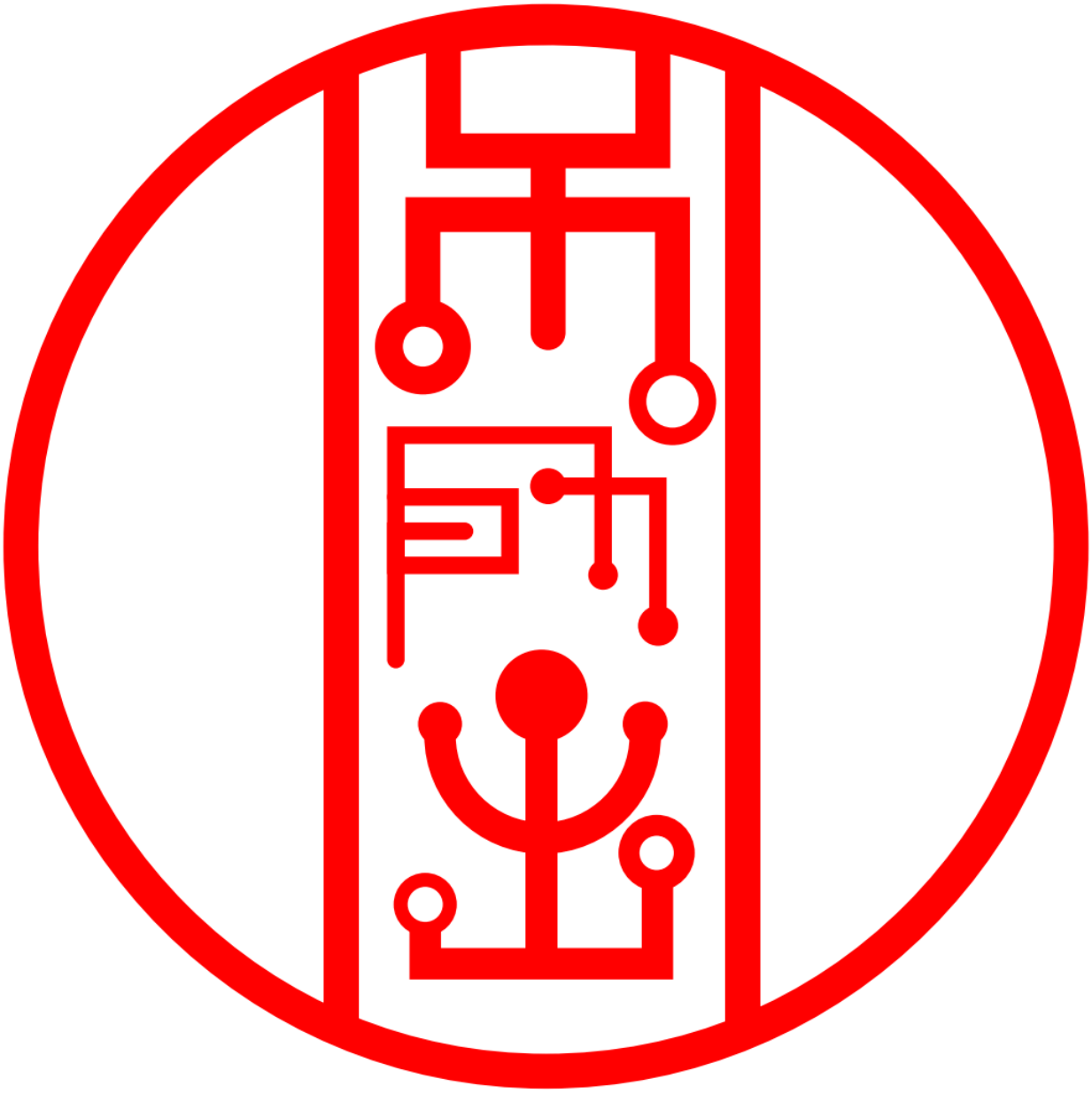
PARAMETER	SYMBOL	TEST CONDITIONS	Quadrants		RATINGS	UNIT
Gate Trigger Current	I_{GT}	VD=12V（DC） RL=100Ω	I II III	MAX	≦50	mA
Gate Trigger Voltage	V_{GT}			MAX	1.5	V
GateNon-Trigger Voltage	V_{GD}	Tj=125℃		MIN	0.2	V
HoldingCurrent (Note 1)	I_H	I_T=0.5A		MAX	60	mA
Latching Current	I_L	I_G=1.2I_{GT}		MAX	60 100	mA
Critical Rate of Rise of Off-State Voltage (Note 1)	dv/dt	V_D=2/3V_{DRM} Tj=125℃		MIN	500	V/us
Critical Rate of Rise of Off-State Voltage at Commutation (Note 1)	(dv/dt)c	Tj=125℃		MIN	10	V/us

■ Electrical characteristics (four quadrants)

PARAMETER	SYMBOL	TEST CONDITIONS	Quadrants		RATINGS		UNIT
Gate Trigger Current	I_{GT}	V_D=12V R_L=100Ω	I II III IV	MAX	I II III	IV	mA
					≦50	≦120	
Gate Trigger Voltage	V_{GT}			MAX	1.5		V
GateNon-Trigger Voltage	V_{GD}	Tj=125℃		MIN	0.2		V
HoldingCurrent (Note 1)	I_H	I_T=0.5A		MAX	60		mA
Latching Current	I_L	I_G=1.2I_{GT}		MAX	60		mA
					100		
Critical Rate of Rise of Off-State Voltage (Note 1)	dv/dt	V_D=2/3V_{DRM} Tj=125℃		MIN	500		V/us
Critical Rate of Rise of Off-State Voltage at Commutation (Note 1)	(dv/dt)c	Tj=125℃		MIN	10		V/us

■ Static parameters

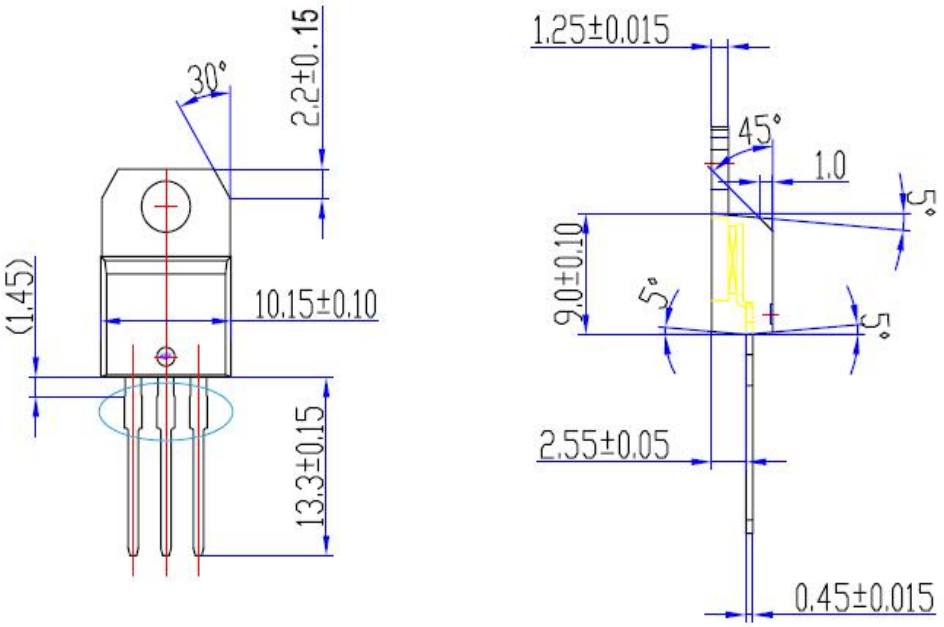
SYMBOL	PARAMETER			RATINGS	UNIT
V_{TM}	Peak On-State Voltage (Note 1)	Tj=25℃ ITM=16A	MAX	1.50	V
V_{T0}	Threshold voltage	Tj=125℃	MAX	0.86	V
Rd	Resistance	Tj=125℃	MAX	36.6	mΩ
I_{DRM} I_{RRM}	Repetitive Peak Off-State Current	Tj=25℃ Tj=125℃	MAX	5	uA
				1	mA
$R_{th(j-c)}$	Junction to Case (DC)	BTA		2.05	℃/W
		BTB		1.25	



PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

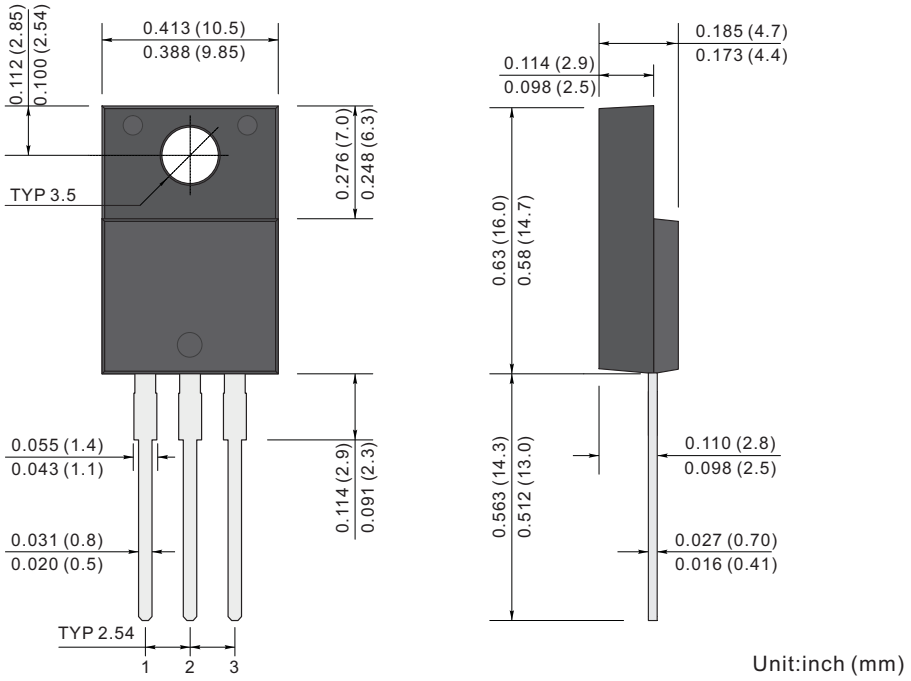
TO-220

●单位：mm(±0.1)



PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

TO-220F



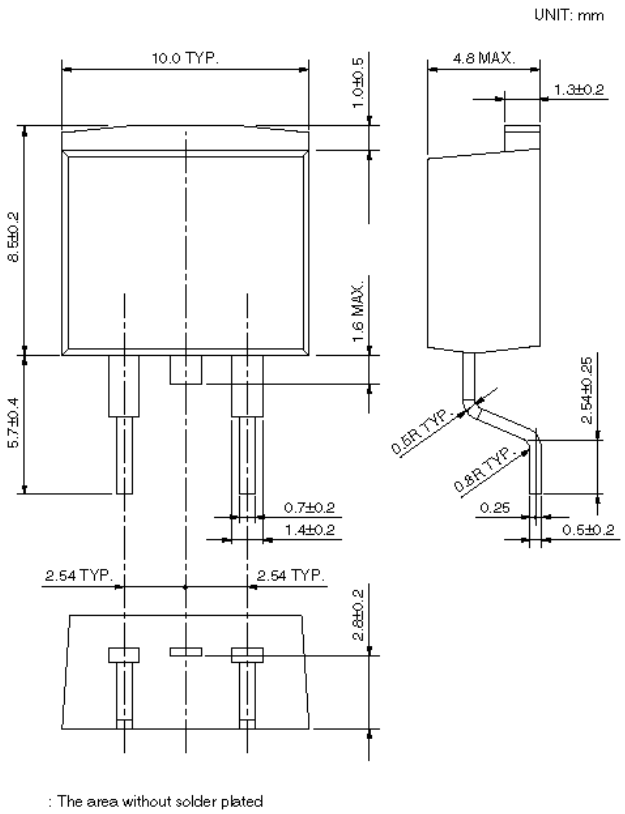
Unit:inch (mm)

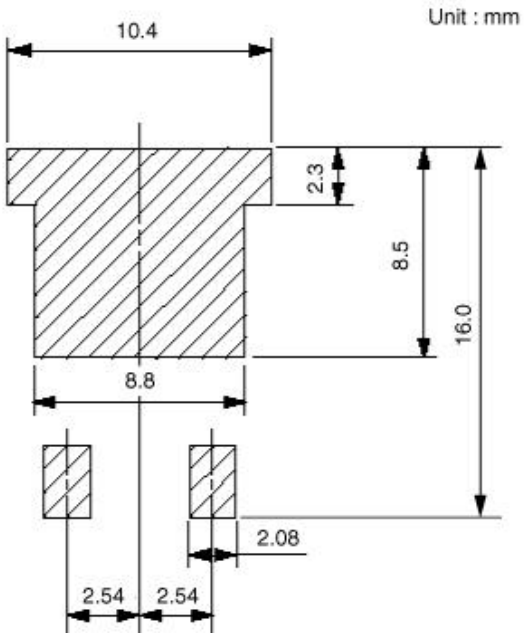
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-263

●单位：mm(±0.1)





PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

TO-252

●单位：mm(±0.1)