



**PRODUCT NAME : BT131 1A 500V TRIAC**

**PRICE : Rs 35.00**

**SKU : RM1984**

## DESCRIPTION



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## Features

- Gate Turn-On Voltage (Vgt): 0.7V
- Peak Off-State Voltage(Vdrm): 500V
- On-State Current (It): 1.0A
- Gate Current (Igt): 3.8mA

**Triacs**

**BT134 series**

**GENERAL DESCRIPTION**

Glass 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.

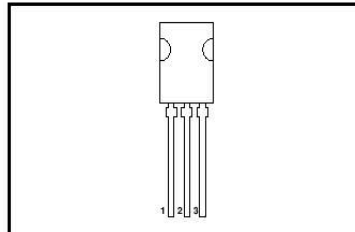
**QUICK REFERENCE DATA**

SYMBOL	PARAMETER	MAX.	MAX.	MAX.	UNIT
$V_{DRM}$	Repetitive peak off-state voltages	BT134-500	600	800	V
		BT134-500F	600F	800F	
		BT134-500G	600G	800G	
$I_{T(RMS)}$	RMS on-state current	4	4	4	A
$I_{TSM}$	Non-repetitive peak on-state current	25	25	25	A

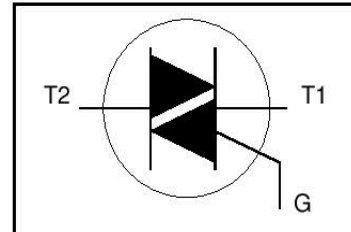
**PINNING - SOT82**

PIN	DESCRIPTION
1	main terminal 1
2	main terminal 2
3	gate
tab	main terminal 2

**PIN CONFIGURATION**



**SYMBOL**



**LIMITING VALUES**

Limiting values in accordance with the Absolute Maximum System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.			UNIT
				-500	-600	-800	
$V_{DRM}$	Repetitive peak off-state voltages		-	500 <sup>1</sup>	600 <sup>1</sup>	800	V
$I_{T(RMS)}$	RMS on-state current	full sine wave; $T_{mb} \leq 107^\circ\text{C}$ .	-	4			A
$I_{TSM}$	Non-repetitive peak on-state current	full sine wave; $T_j = 25^\circ\text{C}$ prior to surge	-	25			A
$I^2t$	$I^2t$ for fusing	$t = 20\text{ ms}$	-	27			A
		$t = 16.7\text{ ms}$	-	3.1			A
		$t = 10\text{ ms}$	-	3.1			A <sup>2</sup> s
$di_T/dt$	Repetitive rate of rise of on-state current after triggering	$I_{TM} = 6\text{ A}$ ; $I_G = 0.2\text{ A}$ ; $di_G/dt = 0.2\text{ A}/\mu\text{s}$					
		T2+ G+	-	50			A/ $\mu\text{s}$
		T2+ G-	-	50			A/ $\mu\text{s}$
		T2- G-	-	50			A/ $\mu\text{s}$
		T2- G+	-	10			A/ $\mu\text{s}$
$I_{GM}$	Peak gate current		-	2			A
$V_{GM}$	Peak gate voltage		-	5			V
$P_{GM}$	Peak gate power		-	5			W
$P_{G(AV)}$	Average gate power	over any 20 ms period	-	0.5			W
$T_{stg}$	Storage temperature		-40	150			$^\circ\text{C}$
$T_j$	Operating junction temperature		-	125			$^\circ\text{C}$

<sup>1</sup> 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 3 A/ $\mu\text{s}$ .

Triacs

BT134 series

**THERMAL RESISTANCES**

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$R_{th\ j-mb}$	Thermal resistance junction to mounting base	full cycle	-	-	3.0	K/W
$R_{th\ j-a}$	Thermal resistance junction to ambient	half cycle in free air	-	100	3.7	K/W

**STATIC CHARACTERISTICS**

$T_j = 25\text{ °C}$  unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.			UNIT
$I_{GT}$	Gate trigger current	<b>BT134-</b> $V_D = 12\text{ V}; I_T = 0.1\text{ A}$	-	-	...	...F	...G	
		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
$I_L$	Latching current	$V_D = 12\text{ V}; I_{GT} = 0.1\text{ A}$	-	-	-	-	-	
		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
$I_H$	Holding current	$V_D = 12\text{ V}; I_{GT} = 0.1\text{ A}$	-	5	15	15	30	mA
$V_T$	On-state voltage	$I_T = 5\text{ A}$	-	1.4	1.70			V
$V_{GT}$	Gate trigger voltage	$V_D = 12\text{ V}; I_T = 0.1\text{ A}$	-	0.7	1.5			V
		$V_D = 400\text{ V}; I_T = 0.1\text{ A}; T_j = 125\text{ °C}$	0.25	0.4	-			V
$I_D$	Off-state leakage current	$V_D = V_{DRM(max)};$ $T_j = 125\text{ °C}$	-	0.1	0.5			mA

**DYNAMIC CHARACTERISTICS**

$T_j = 25\text{ °C}$  unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN.			TYP.	MAX.	UNIT
$dV_D/dt$	Critical rate of rise of off-state voltage	<b>BT134-</b> $V_{DM} = 67\% V_{DRM(max)};$ $T_j = 125\text{ °C};$ exponential waveform; gate open circuit	100	50	200	250	-	V/ $\mu$ s
$dV_{com}/dt$	Critical rate of change of commutating voltage	$V_{DM} = 400\text{ V}; T_j = 95\text{ °C};$ $I_{T(RMS)} = 4\text{ A};$ $dI_{com}/dt = 1.8\text{ A/ms};$ gate open circuit	-	-	10	50	-	V/ $\mu$ s
$t_{gt}$	Gate controlled turn-on time	$I_{TM} = 6\text{ A}; V_D = V_{DRM(max)};$ $I_G = 0.1\text{ A};$ $dI_G/dt = 5\text{ A}/\mu$ s;	-	-	-	2	-	$\mu$ s

