

TO-263

Schottky Barrier Diode in a TO-263 Plastic Package.

Low forward voltage drop, low power losses High efficiency operation.

OR-ing

DC-DC

For use in solar cell junction box as a bypass diode for protection, For use in high frequency inverters, switching power supplies, freewheeling diodes, OR-ing diode, dc-to-dc converters and reverse battery protection.



PIN1 Anode

PIN 2 4 Cathode

PIN 3 Anode

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	V
Maximum RMS Voltage	$V_{RMS}$	31.5	V
Maximum Average forward current	$I_{F(AV)}$	30	A
Non Repetitive Peak Surge Current	$I_{FSM}$	350	A
Thermal Resistance Junction to Case	$R_{Jc}$	1.6	/W
Operating junction and storage temperature range (AC mode)	$T_j, T_{stg}$	-65 +150	
Junction temperature in DC forward current without reverse bias, t 1 h	$T_j \text{ max. }^{(1)}$	200	

## /Notes

1 In accordance with the IEC 61215 Ed.2 bypass diode heating test standard, tested under forward DC condition, no reverse voltage drop was applied, the power up time is less than 1H. bypass diode thermal test DC forward current without reverse bias.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown voltage	$V_{BR}$	$I_R = 500 \mu A$	50			V
Forward Voltage	$V_F$ Note 1	$I_F = 15A (T_A = 25^\circ C)$		0.45	0.50	V
		$I_F = 30A (T_A = 25^\circ C)$		0.50	0.54	V
		$I_F = 15A (T_A = 125^\circ C)$			0.40	V
		$I_F = 30A (T_A = 125^\circ C)$			0.50	V
Instantaneous Reverse Current	$I_R$ Note 2	$V_R = 45V (T_A = 25^\circ C)$			100	$\mu A$
		$V_R = 45V (T_A = 125^\circ C)$			50	mA

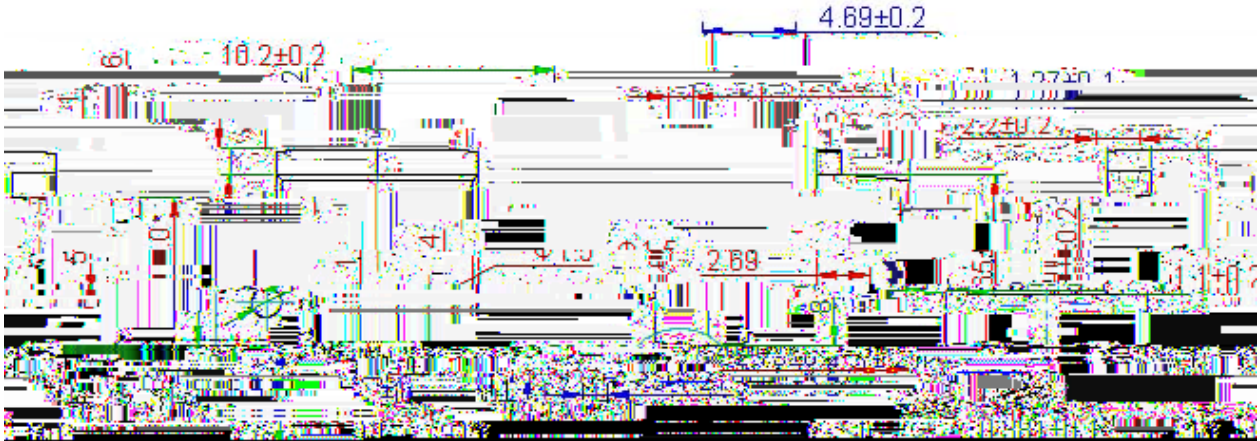
## /Notes

(1) Pulse test: 300  $\mu s$  pulse width, 1 % duty cycle

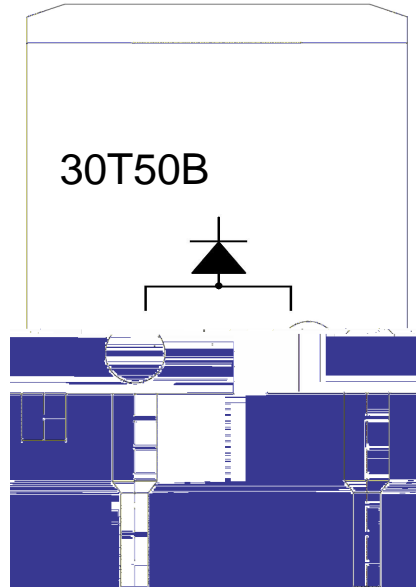
(2) Pulse test: Pulse width 40 ms

(3)

Unless otherwise noted, values for the parameters of a single chip

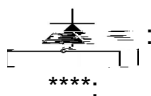


$\pm 0.15\text{mm}$       R 0.15mm



Note:

30T50B

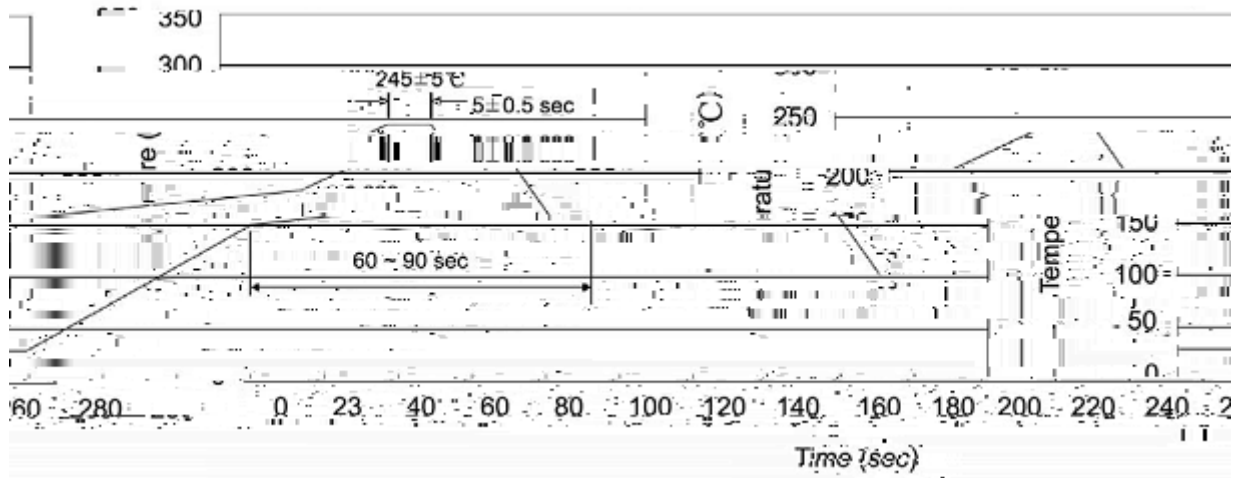


Product Type Code.

Internal Structure

Lot No. Code, code change with Lot No.

### Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |          |              |   |
|---|----------|--------------|---|
| 1 | 25 ~ 150 | 60 ~ 90sec;  | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 245±5    | 5±0.5sec;    | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 |          | 2 ~ 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

260±5                      10±1 sec.                      Temp.:260±5                      Time:10±1 sec

/ TUBE

Package Type	Units	Dimension (unit mm <sup>3</sup> )
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