

TOSHIBA Schottky Barrier Rectifier Schottky Barrier Type

# CMS09

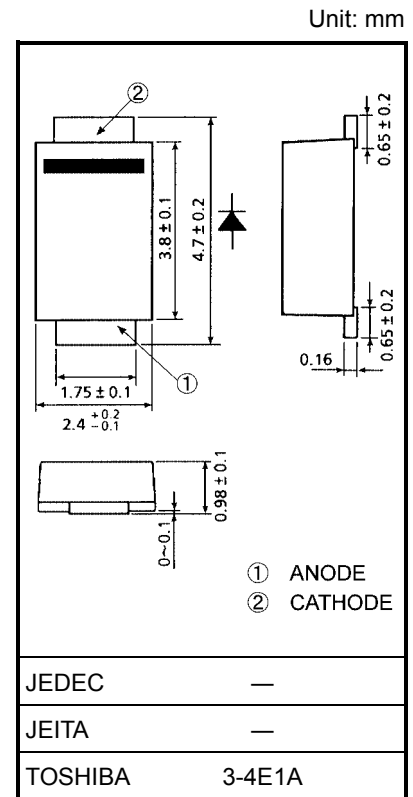
Switching Mode Power Supply Applications  
 Portable Equipment Battery Applications

- Forward voltage:  $V_{FM} = 0.45 \text{ V (max)}$
- Average forward current:  $I_F (AV) = 1.0 \text{ A}$
- Repetitive peak reverse voltage:  $V_{RRM} = 30 \text{ V}$
- Suitable for compact assembly due to small surface-mount package  
 "M-FLAT™" (Toshiba package name)

### Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Repetitive peak reverse voltage	$V_{RRM}$	30	V
Average forward current (Note)	$I_F (AV)$	1.0 (Ta = 51°C)	A
Peak one cycle surge forward current (non-repetitive)	$I_{FSM}$	25 (50 Hz)	A
Junction temperature	$T_j$	-40~150	°C
Storage temperature	$T_{stg}$	-40~150	°C

Note: Device mounted on a glass-epoxy board  
 (board size: 50 mm × 50 mm, soldering land: 6 mm × 6 mm)



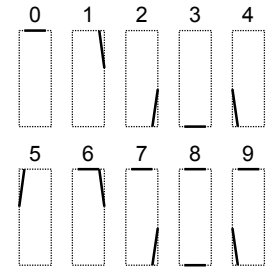
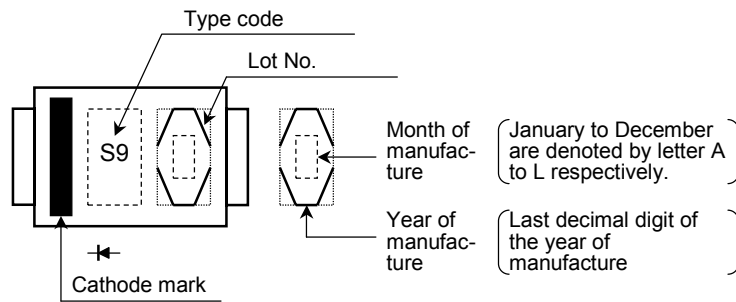
Weight: 0.023 g (typ.)

### Electrical Characteristics (Ta = 25°C)

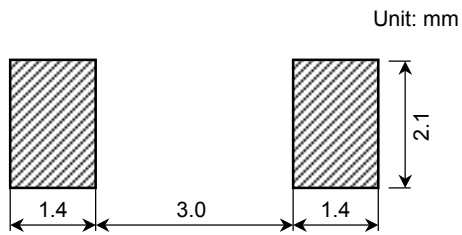
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Peak forward voltage	$V_{FM} (1)$	$I_{FM} = 0.1 \text{ A}$	—	0.32	—	V
	$V_{FM} (2)$	$I_{FM} = 0.5 \text{ A}$	—	0.37	—	
	$V_{FM} (3)$	$I_{FM} = 1.0 \text{ A}$	—	0.40	0.45	
Repetitive peak reverse current	$I_{RRM}$	$V_{RRM} = 5 \text{ V}$	—	1.5	—	μA
	$I_{RRM}$	$V_{RRM} = 30 \text{ V}$	—	15.0	500	
Junction capacitance	$C_j$	$V_R = 10 \text{ V}, f = 1.0 \text{ MHz}$	—	70	—	pF
Thermal resistance	$R_{th (j-a)}$	Device mounted on a ceramic board (soldering land: 2 mm × 2 mm)	—	—	60	°C/W
		Device mounted on a glass-epoxy board (soldering land: 6 mm × 6 mm)	—	—	135	
Thermal resistance	$R_{th (j-t)}$	—	—	—	16	°C/W

**Marking**

**Following Indicates the Data of Manufacture**

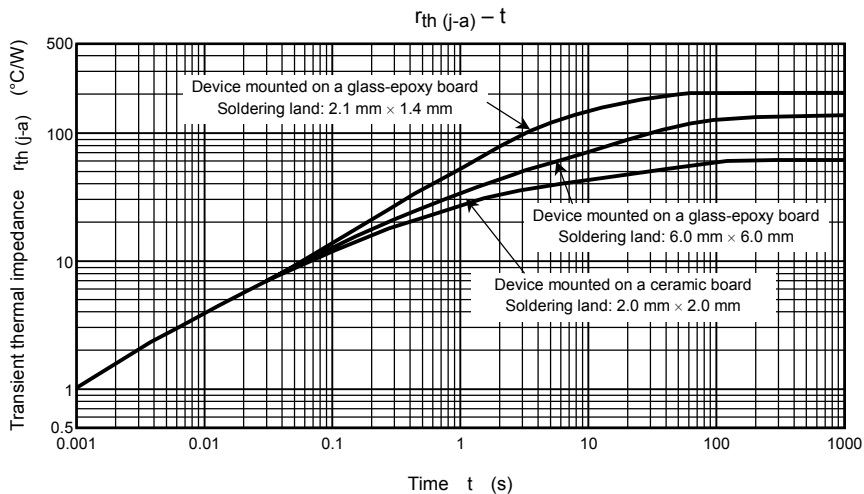
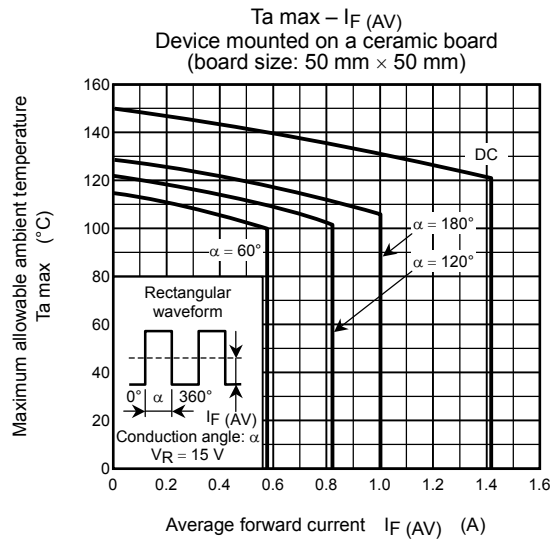
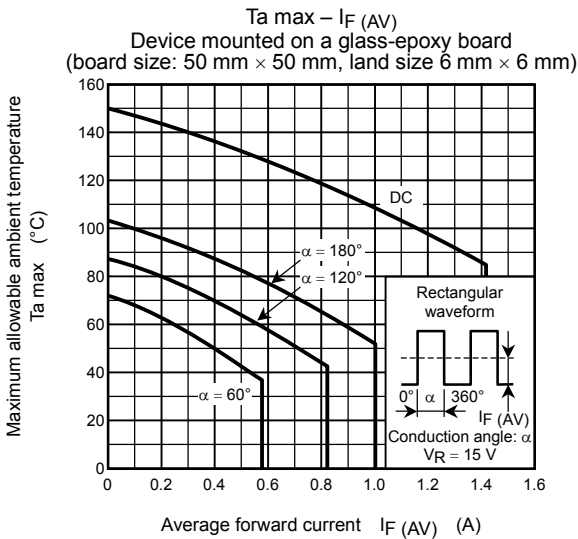
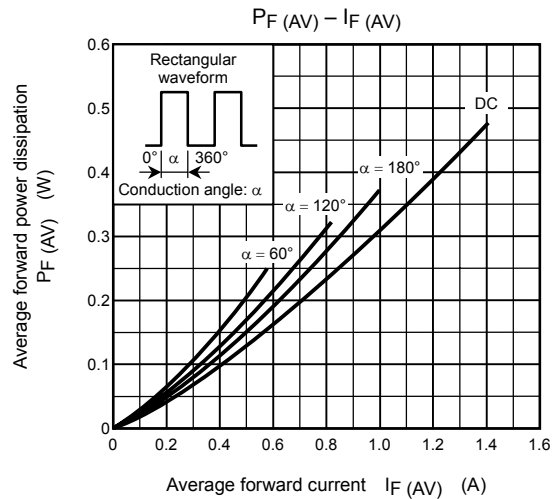
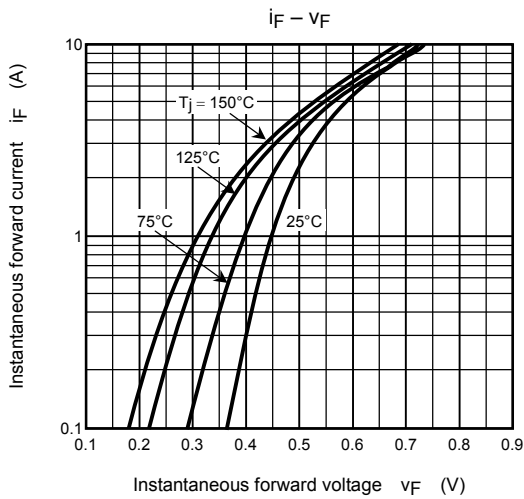


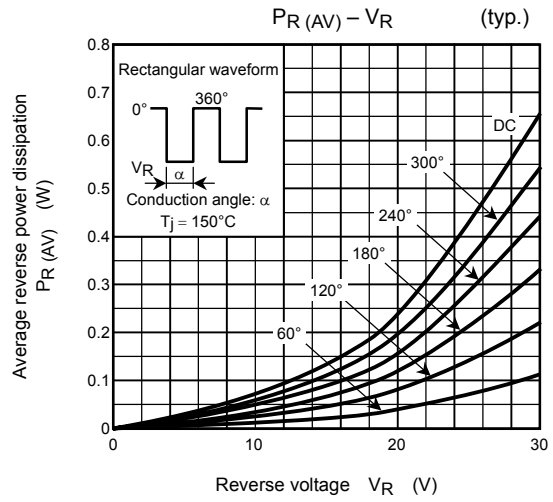
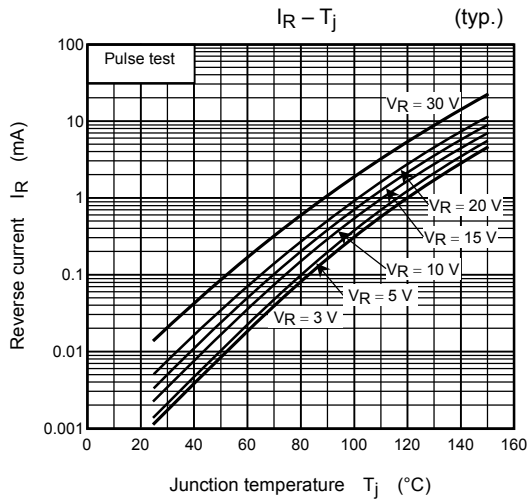
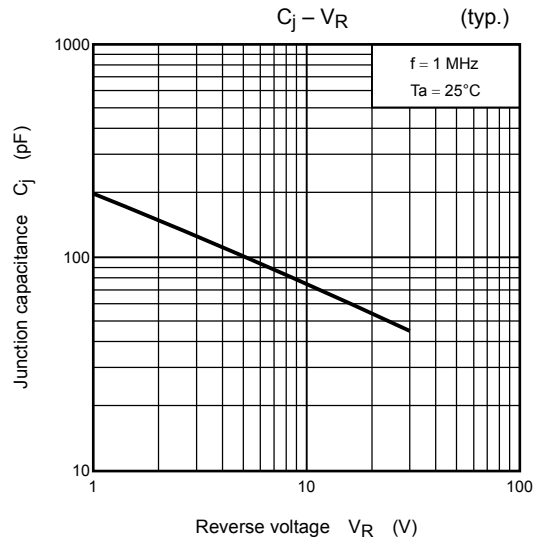
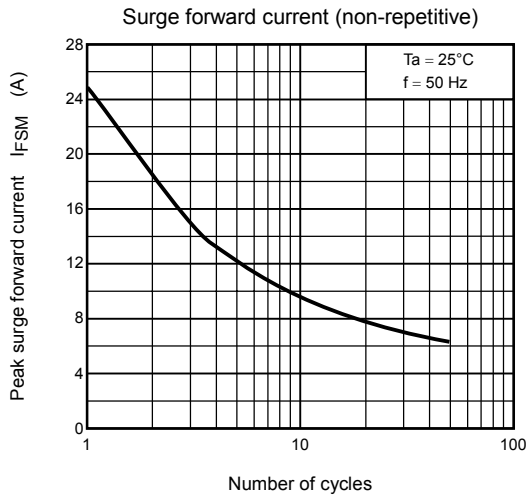
**Standard Soldering Pad**



**Handling Precaution**

Schottky barrier diodes are having large reverse-current-leakage characteristic compare to the other rectifier products. This current leakage and improper operating temperature or voltage may cause thermal runaway. Please take forward and reverse loss into consideration when you design.





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