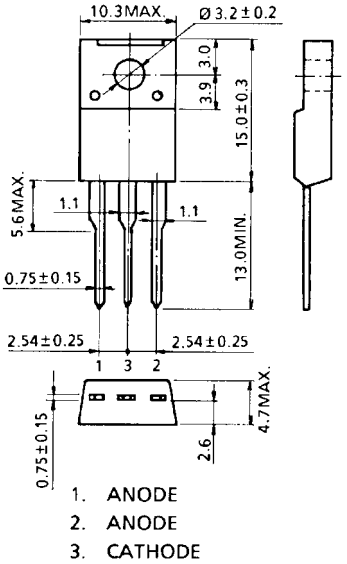
TOSHIBA Schottky Barrier Rectifier Stack Trench Schottky Barrier Type

30QWK2CZ47

Switching Type Power Supply Application
Converter & Chopper Application

- Repetitive peak reverse voltage: V_{RRM} = 120 V
- Peak Forward Voltage: V_{FM} = 0.85 V (max)
- Average output recified current: I_O = 30 A
- Low switching losses and output noise.

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	12-10C1A

Weight: 2.0 g (typ.)

Maximum Ratings (Ta = 25°C)

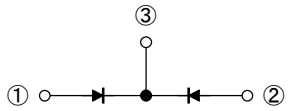
Characteristics	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	120	V
Average output recified current	I_O	30	A
Peak one cycle surge forward current (non-repetitive, sine wave)	I_{FSM}	250 (50 Hz)	A
Junction temperature	T_j	−40~150	°C
Storage temperature range	T_{stg}	−40~150	°C
Screw Torque	—	0.6	N·m

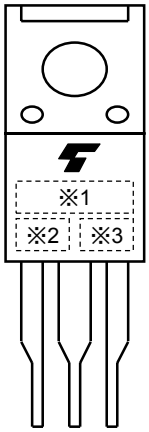
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Peak forward voltage	V_{FM}	I_{FM} = 15 A	—	—	0.85	V
Repetitive peak reverse current	I_{RRM}	V_{RRM} = Rated (120 V)	—	—	50	μA
Junction capacitance	C_j	V_R = 10 V, f = 1.0 MHz	—	227	—	pF
Thermal resistance	$R_{th\ (j\text{-}c)}$	DC Total, Junction to case	—	—	2.5	°C/W

Note: V_{FM}, I_{RRM}, C_j: A value of one cell.

Polarity **Marking**





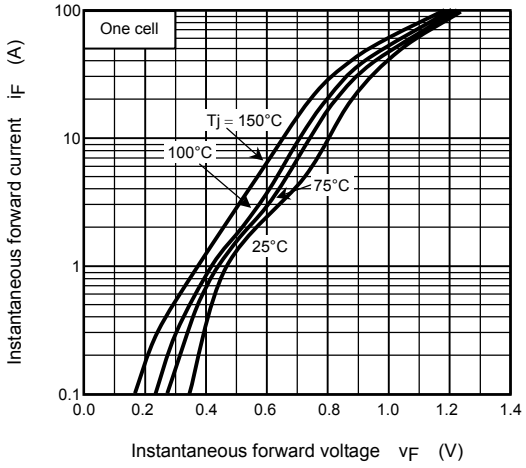
※1	MARK	30QWK2C	TYPE	30QWK2CZ47
※2	None			
※3	Lot Number □□ — Month (starting from alphabet A) └— Year (last number of the christian era)			

Handling Precaution

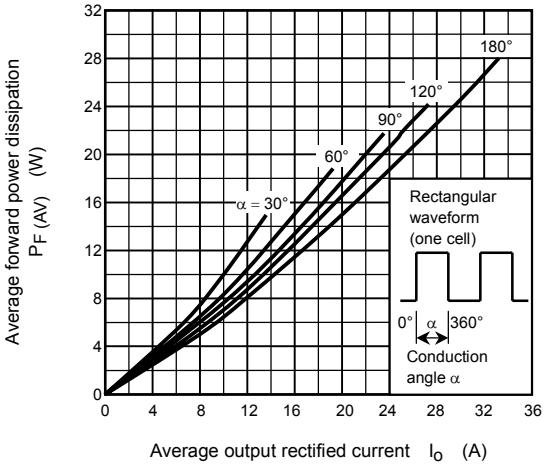
Schottky barrier diodes are having large-reverse-current-leakage characteristic compare to other rectifier products. This current leakage and not proper operating temperature or voltage may cause thermal run.

Please take forward and reverse loss into consideration when you design.

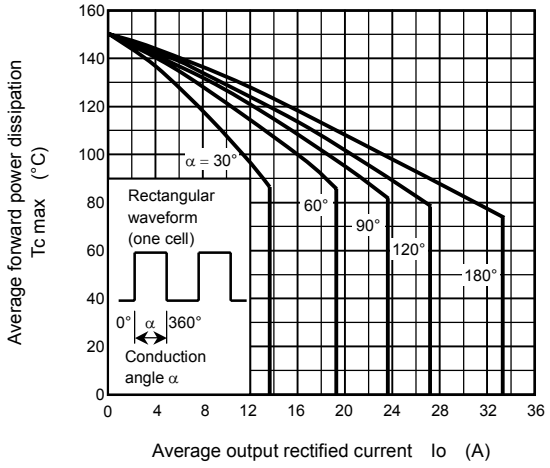
$i_F - v_F$



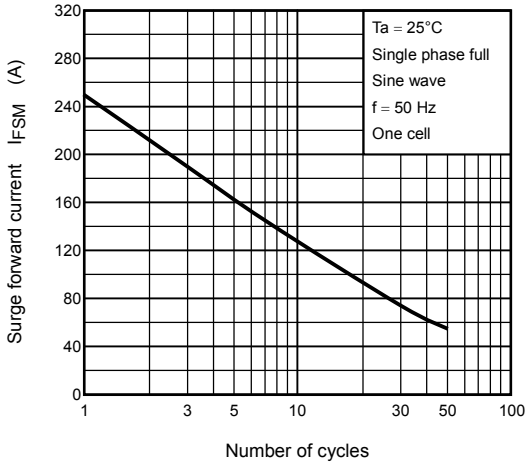
$P_{F\,(AV)} - I_o$



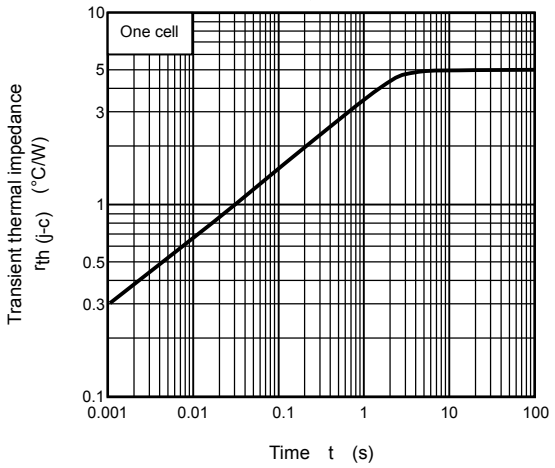
Tc max – I_o



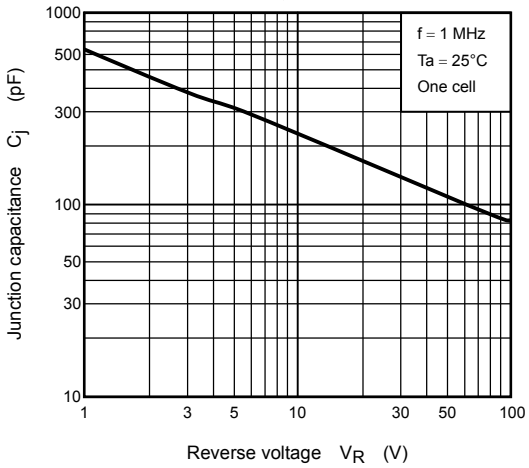
Surge forward current (non-repetitive)



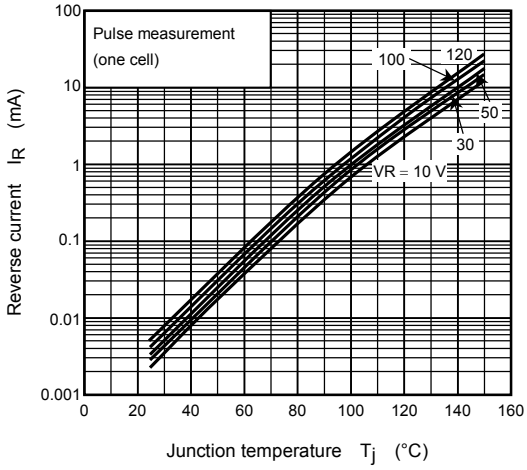
$r_{th\,(j\text{-}c)} - t$



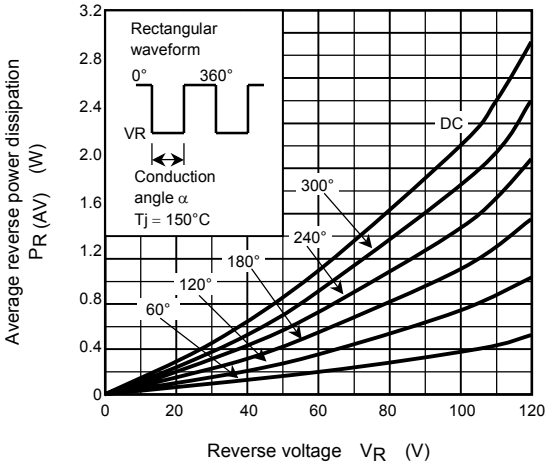
$C_j - V_R$ (typical)



$I_R - T_j$ (typical)



$P_{R\ (AV)} - V_R$ (typical)



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