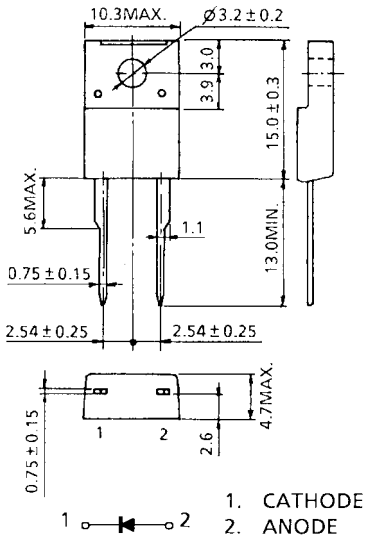
TOSHIBA HIGH EFFICIENCY RECTIFIER SILICON EPITAXIAL TYPE

5DLZ47A

SWITCHING MODE POWER SUPPLY APPLICATION
CONVERTER & CHOPPER APPLICATION

- Repetitive Peak Reverse Voltage : V_{RRM} = 200V
- Average Forward Current : $I_{F\ (AV)}$ = 5A
- Ultra Fast Reverse-Recovery Time : t_{rr} = 35ns (Max)
- Low Forward Voltage : V_{FM} = 0.98V
- Low Switching Losses and Low Output Noise.

Unit: mm



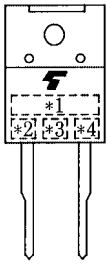
JEDEC	—
JEITA	—
TOSHIBA	3−10C3A

Weight: 2.0g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	200	V
Average Forward Current	$I_{F\ (AV)}$	5	A
Peak One Cycle Surge Forward Current (Non−Repetitive)	I_{FSM}	50 (50Hz)	A
		60 (60Hz)	
Junction Temperature	T_j	−40~150	°C
Storage Temperature Range	T_{stg}	−40~150	°C
Screw Torque	—	0.6	N·m

MARKING

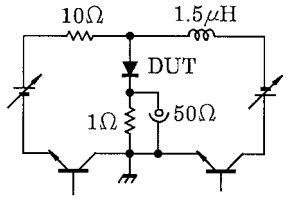


* 1	MARK	5DLZ47	TYPE	5DLZ47A
* 2	A			
* 3	Polarity			
* 4	Lot Number Month (Starting from Alphabet A) Year (Last Number of the Christian Era)			

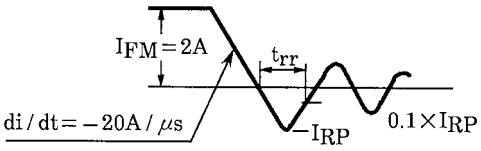
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Peak Forward Voltage		V_{FM}	I_{FM} = 5A	—	0.98	V
Repetitive Peak Reverse Current		I_{RRM}	V_{RRM} = 200V	—	10	μA
Reverse Recovery Time	(Note 1)	t_{rr}	I_F = 2A, di / dt = −20A / μs	—	35	ns
Forward Recovery Time	(Note 2)	t_{fr}	I_F = 1A	—	100	ns
Thermal Resistance		$R_{th\ (j-c)}$	DC	—	4.0	°C / W

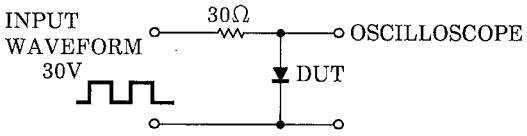
Note 1: t_{rr} TEST CIRCUIT



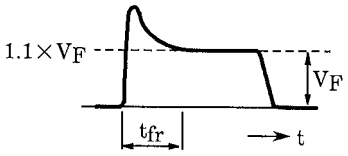
t_{rr} WAVEFORM



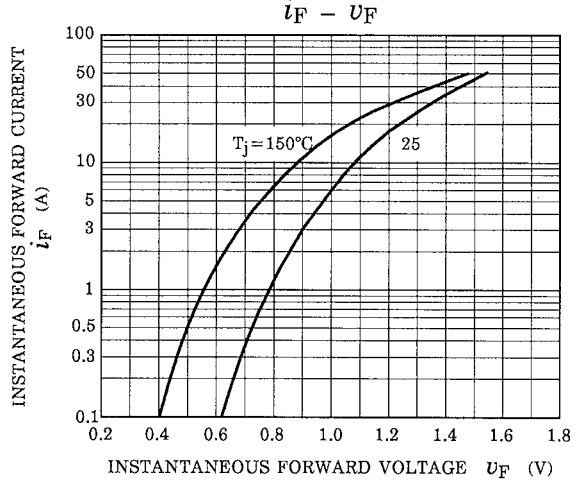
Note 2: t_{fr} TEST CIRCUIT



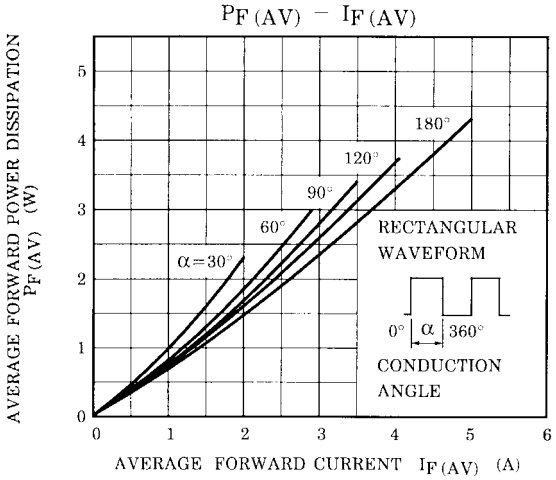
t_{rr} WAVEFORM



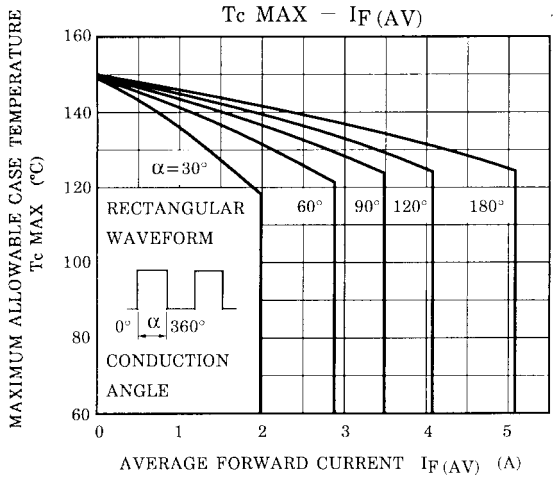
$i_F - v_F$



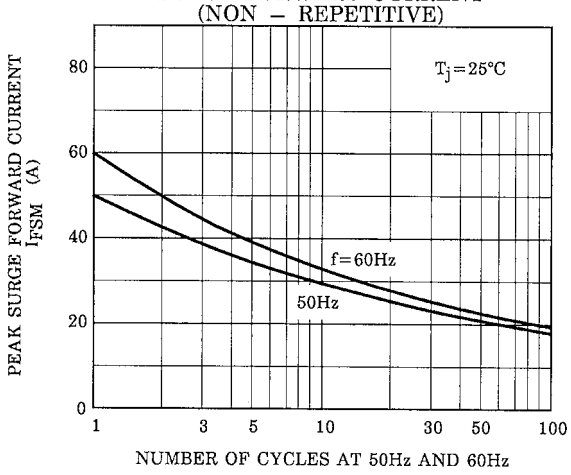
$P_{F(AV)} - I_{F(AV)}$



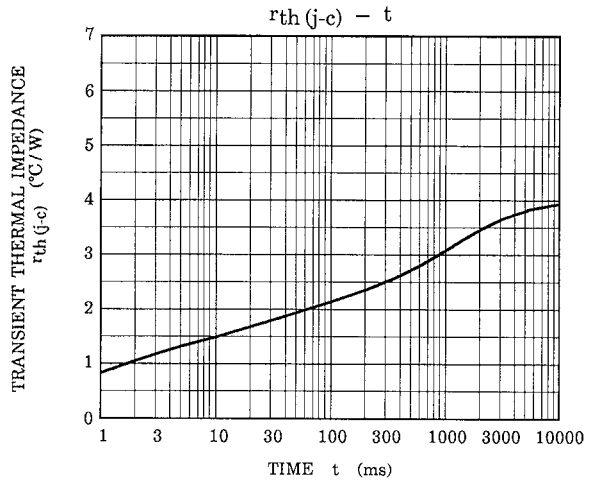
T_C MAX $- I_{F(AV)}$



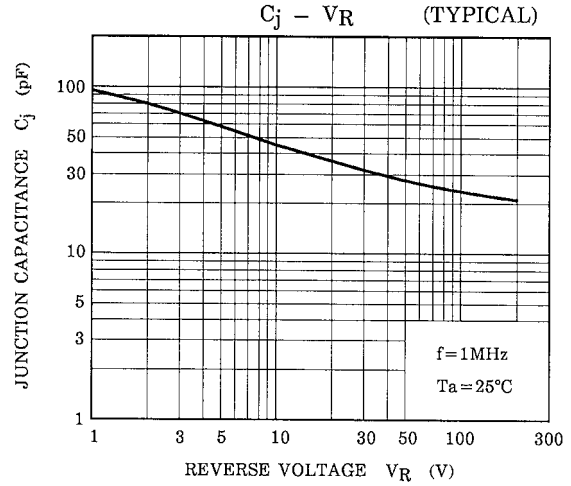
SURGE FORWARD CURRENT (NON – REPETITIVE)



$r_{th(j-c)} - t$



$C_j - V_R$ (TYPICAL)



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