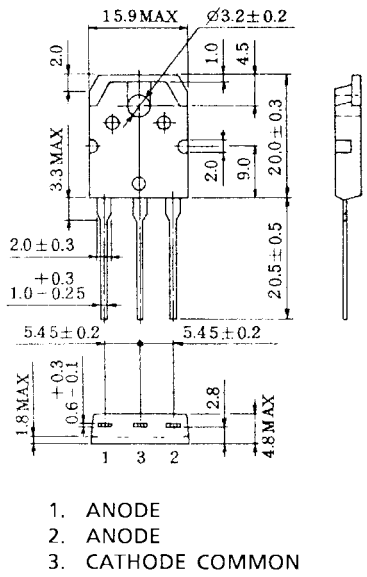
TOSHIBA HIGH EFFICIENCY DIODE STACK (HED) SILICON EPITAXIAL TYPE

20DL2C41A,20FL2C41A,20GL2C41A

SWITCHING MODE POWER SUPPLY APPLICATIONS
CONVERTER & CHOPPER APPLICATION

- Repetitive Peak Reverse Voltage : V_{RRM} = 200, 300, 400V
- Average Output Rectified Current : I_O = 20A
- Ultra Fast Reverse-Recovery Time : t_{rr} = 35ns (Max)
- Low Switching Losses and Output Noise

Unit: mm



1. ANODE
2. ANODE
3. CATHODE COMMON

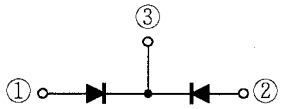
JEDEC	—
JEITA	—
TOSHIBA	2-16D1A

Weight: 4.85g

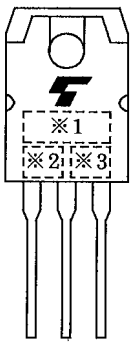
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	20DL2CZ41A	V_{RRM}	200	V
	20FL2CZ41A		300	
	20GL2CZ41A		400	
Average Output Rectified Current		I_O	20	A
Peak One Cycle Surge Forward Current (Non Repetitive)		I_{FSM}	100 ($50H_Z$)	A
			110 ($60H_Z$)	
Junction Temperature		T_j	−40~150	°C
Storage Temperature Range		T_{stg}	−40~150	°C
Screw Torque		−	0.8	N·m

POLARITY



MARKING



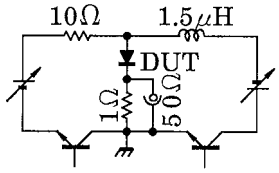
* 1	MARK	20DL2C	TYPE	20DL2C41A
		20FL2C		20FL2C41A
		20GL2C		20GL2C41A
* 2	A			
* 3	Lot number □ □ — Month (Starting from Alphabet A) — Year (Last Number of the Christian Era)			

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

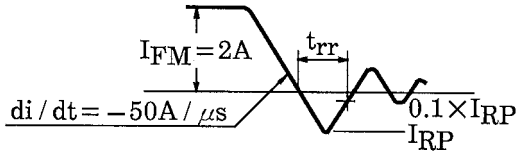
CHARACTERISTIC		SYMBOL	TEST CONDITION	TYP.	MAX	UNIT
Peak Forward Voltage (Note 1)	20DL2C41A	V_{FM}	I_{FM} = 10A	—	0.98	V
	20FL2C41A			—	1.3	
	20GL2C41A			—	1.8	
Repetitive Peak Reverse Current (Note 1)		I_{RRM}	V_{RRM} = Rated	—	50	μA
Reverse Recovery Time (Note 1)		t_{rr}	I_F = 2.0A, di / dt = − 50A / μs	—	35	ns
Forward Recovery Time (Note 1)		t_{fr}	I_F = 1A	—	100	ns
Thermal Resistance		$R_{th\ (j-c)}$	DC Total, Junction to Case	—	1.5	°C / W

Note 1: A value of one cell.

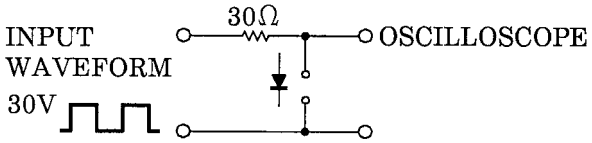
Note 2: trr TEST CIRCUIT



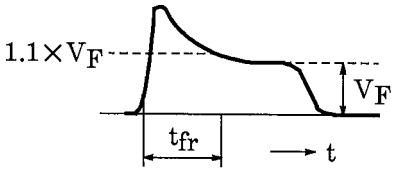
trr WAVEFORM



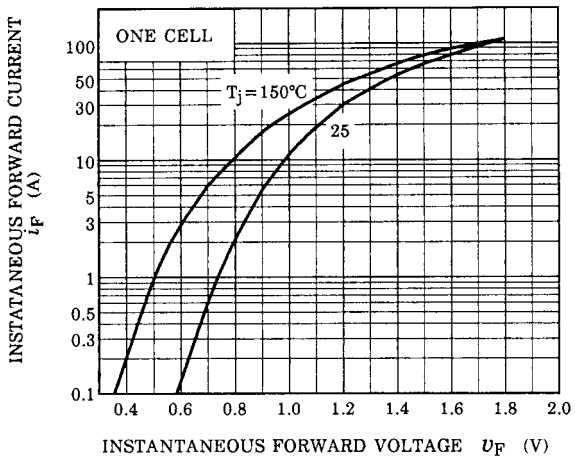
Note 3: t_{fr} TEST CIRCUIT



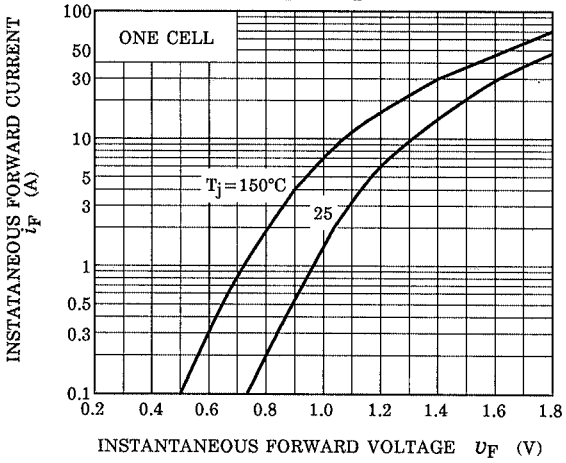
t_{fr} Waveform



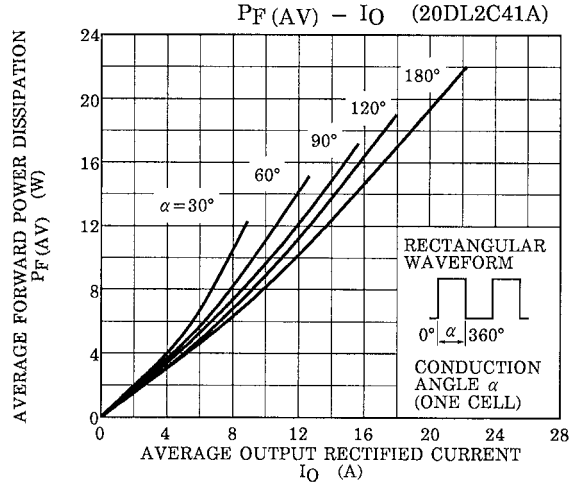
$i_F - v_F$ (20DL2C41A)



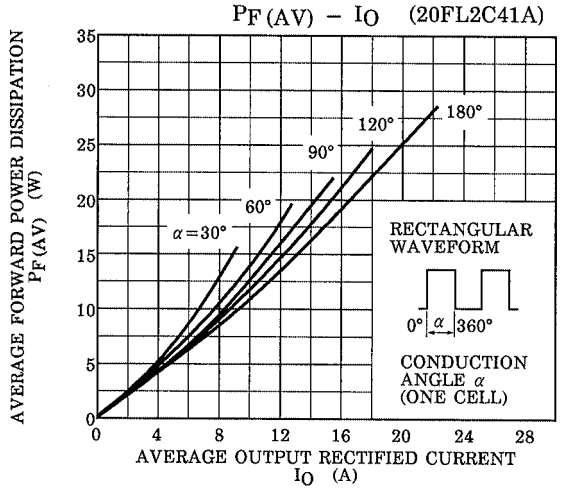
$i_F - v_F$ (20FL2C41A)



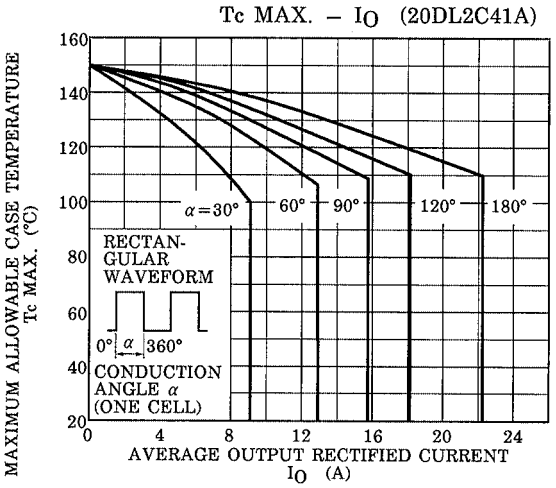
$P_{F(AV)} - I_O$ (20DL2C41A)



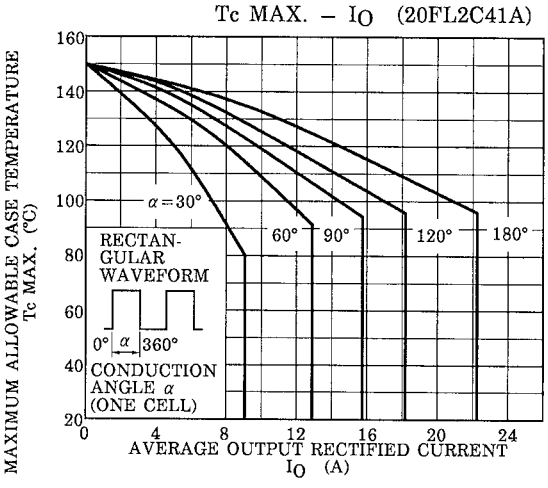
$P_{F(AV)} - I_O$ (20FL2C41A)



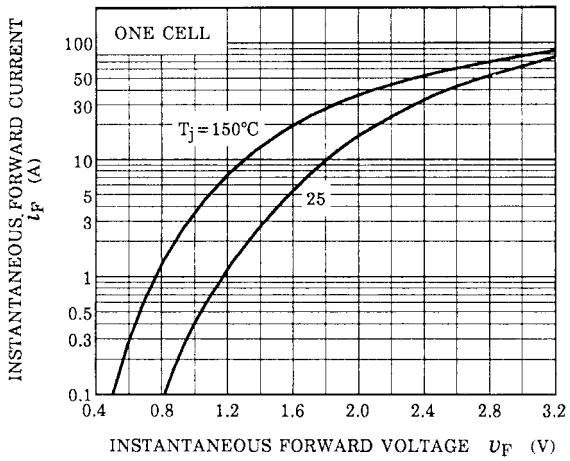
Tc MAX. – I_O (20DL2C41A)



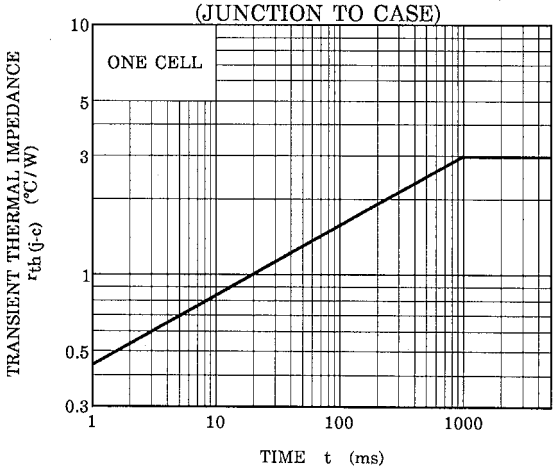
Tc MAX. – I_O (20FL2C41A)



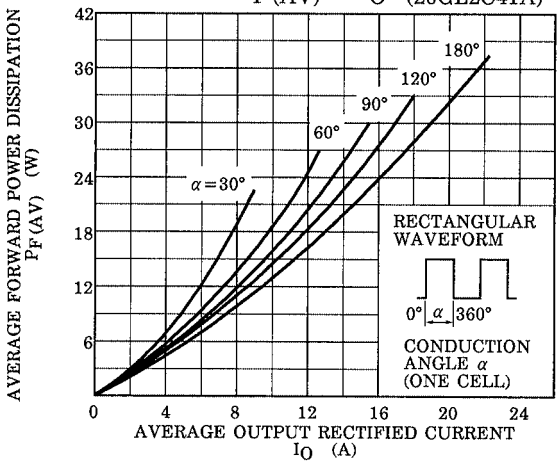
$i_F - v_F$ (20GL2C41A)



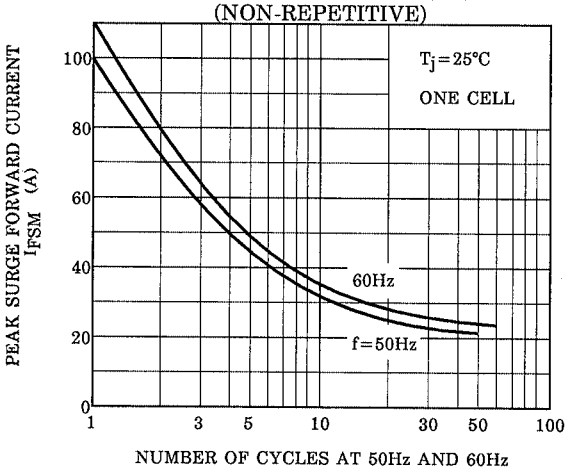
TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



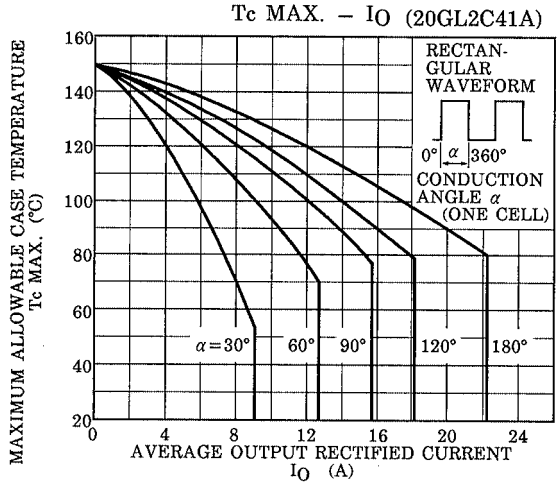
$P_{F(AV)} - I_O$ (20GL2C41A)



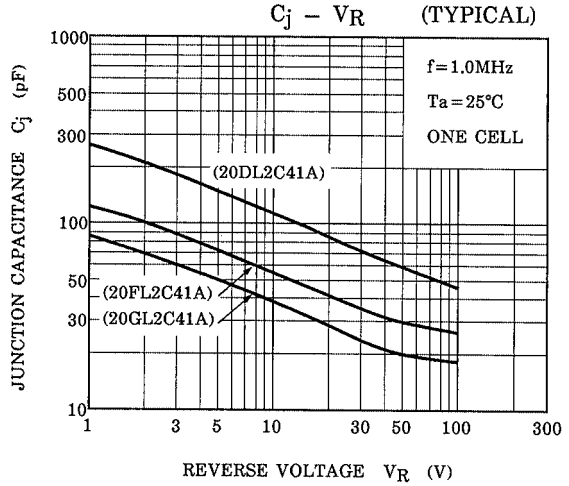
SURGE FORWARD CURRENT (NON-REPETITIVE)



Tc MAX. – I_O (20GL2C41A)



$C_j - V_R$ (TYPICAL)



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