

BRGB75L65AHA

Rev.B May.-2026

/ Descriptions

TO-247

Insulated-Gate Bipolar Transistor in a TO-247 Plastic Package.

/ Features

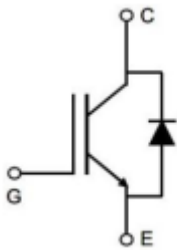
$V_{CES} = 650V$ $I_C (T_C = 100^\circ C) = 75A$

$V_{CE(SAT)} = 2.00V(\text{typ.}) @ V_{GE} = 15V, I_C = 75A$

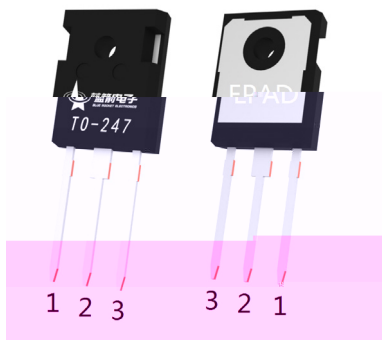
/ Applications

Motor driver, Uninterrupted Power Supply, , Portable power station.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 EPAD C PIN 3 E

/ Marking

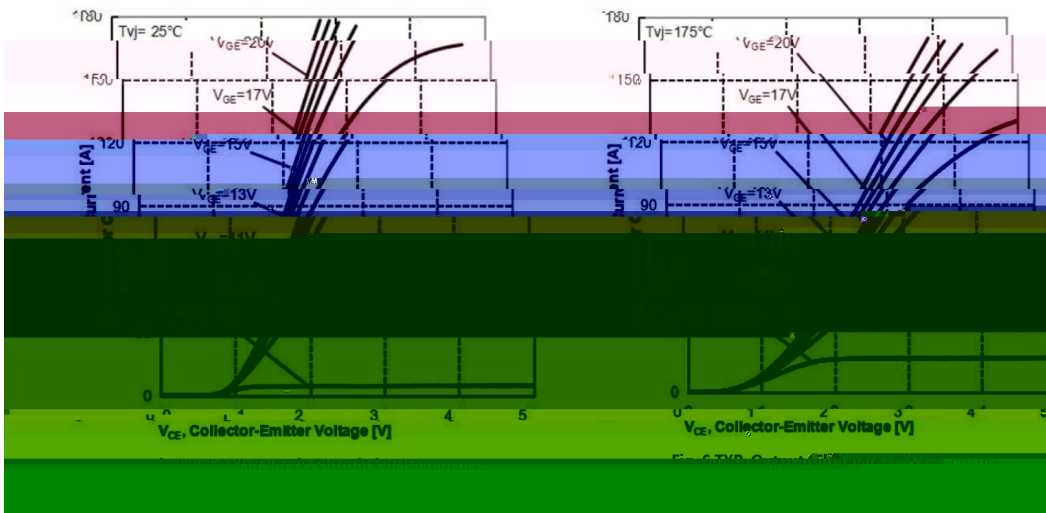
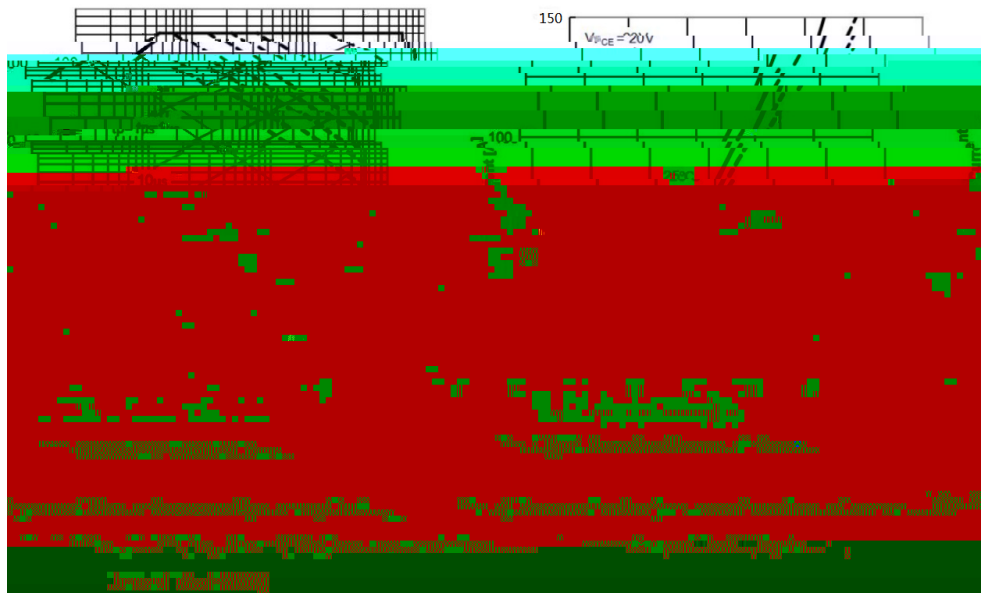
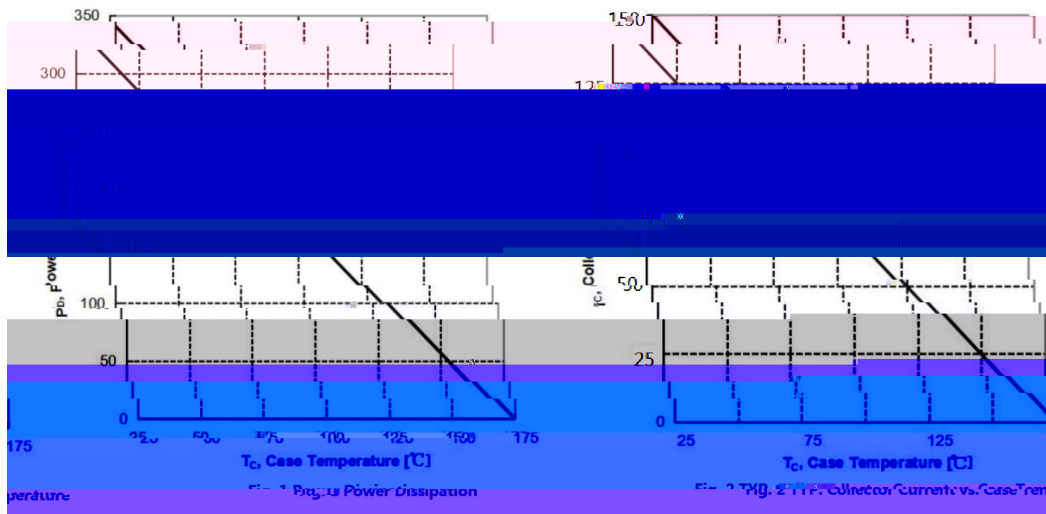
See Marking Instructions.

		Symbol	Rating	Unit
		V_{CES}	650	V
		V_{GES}	30	V
	$T_C=25$	I_C	150	A
	$T_C=100$		75	A
imited by T_{Jmax}		I_{CM}	300	A
	$T_C=25$	I_F	150	A
	$T_C=100$		75	A
ward Current		I_{FRM}	300	A
		t_{sc}	8	μs
	$T_C=25$	P_D	341	W
Soldering		T_L	260	
ture Range		T_J	-40 to +175	
		T_{STG}	-55 to +175	
nt		$R_{\theta JA}$	40	/W
Case		$R_{\theta JC}$	0.55	/W
Case		$R_{\theta JC}$	1.44	/W

	Symbol	Test Conditions	Min	Typ	Max	Unit
	BV_{CES}	$I_C=1mA, V_{GE}=0V$	650			V
urrent	I_{CES}	$V_{CE}=650V, V_{GE}=0V$			10	μA
	I_{GES}	$V_{CE}=0V, V_{GE}= \pm 20V$			200	nA
e	$V_{GE(th)}$	$I_C=1.0mA, V_{GE}=0V$	4.3	5.3	6.3	V
oltage	$V_{CE(sat)}$	$V_{GE}=15V, I_C=75A$	$T_J=25$	2.00	2.30	V
			$T_J=125$	2.23		
			$T_J=175$	2.37		
	Q_g	$V_{GE}=15V, V_{CC}=520V, I_C=75A$		167		nC

Unit
ns
ns
ns
ns
ns
ns
ns
ns
ns
mJ
mJ
mJ

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

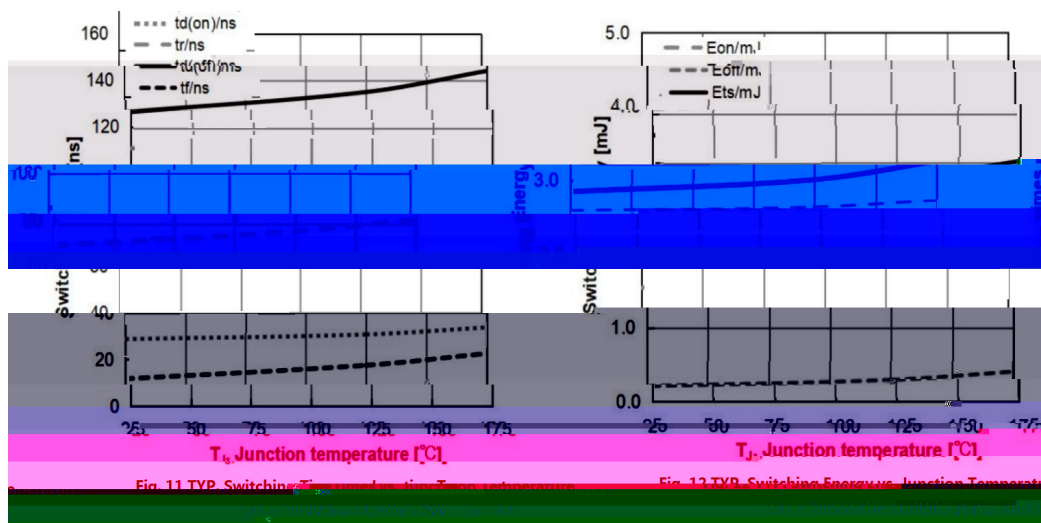
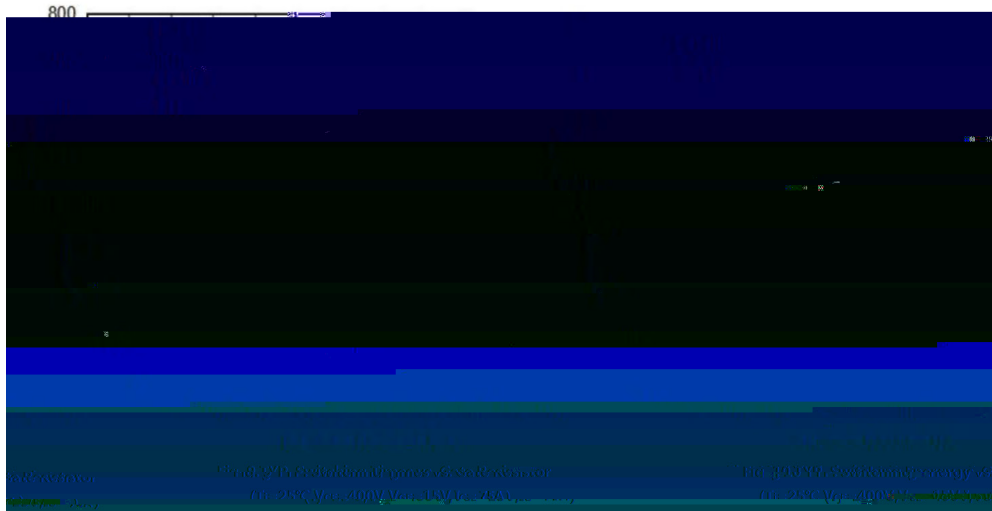
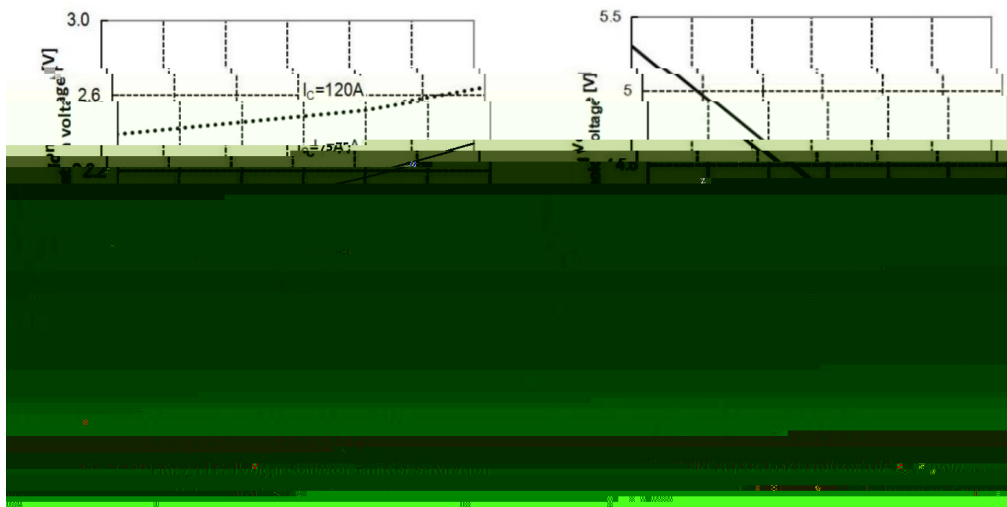
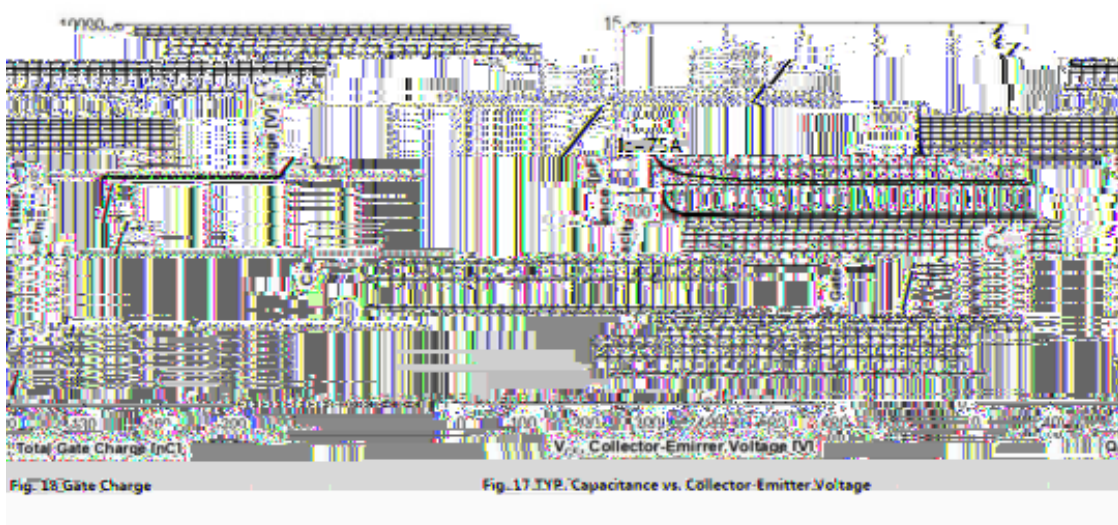
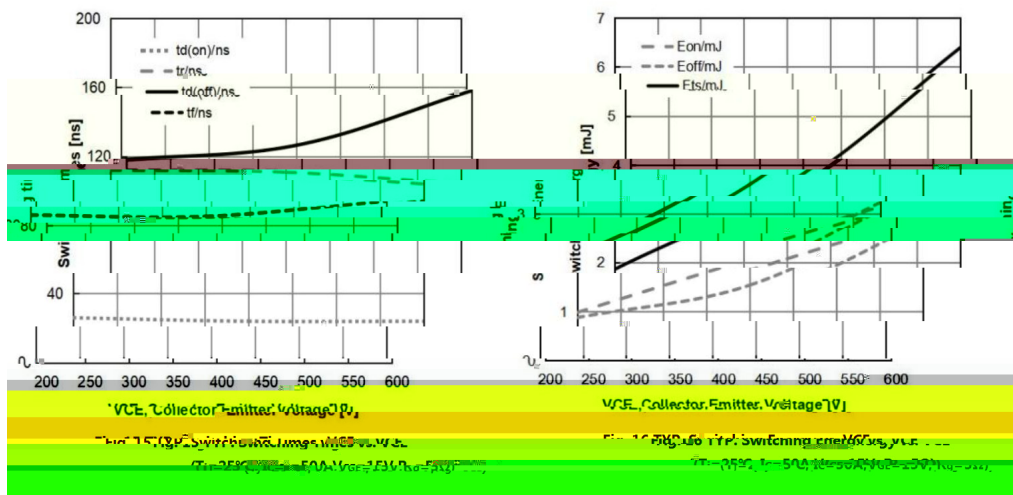
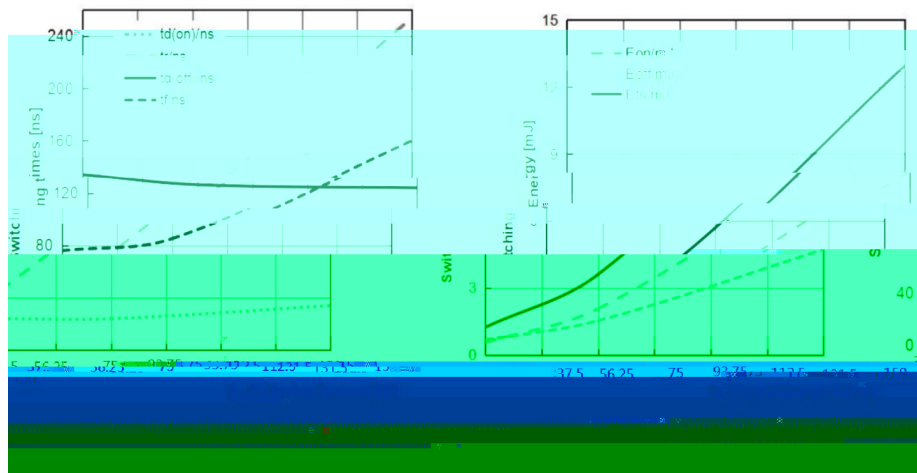


Fig. 11 TYP. Switching Time vs. Junction Temperature

Fig. 12 TYP. Switching Energy vs. Junction Temperature

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

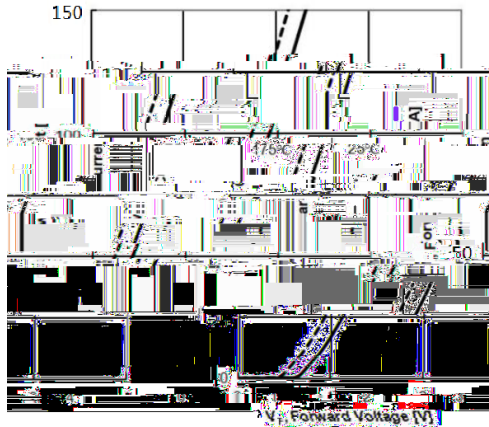
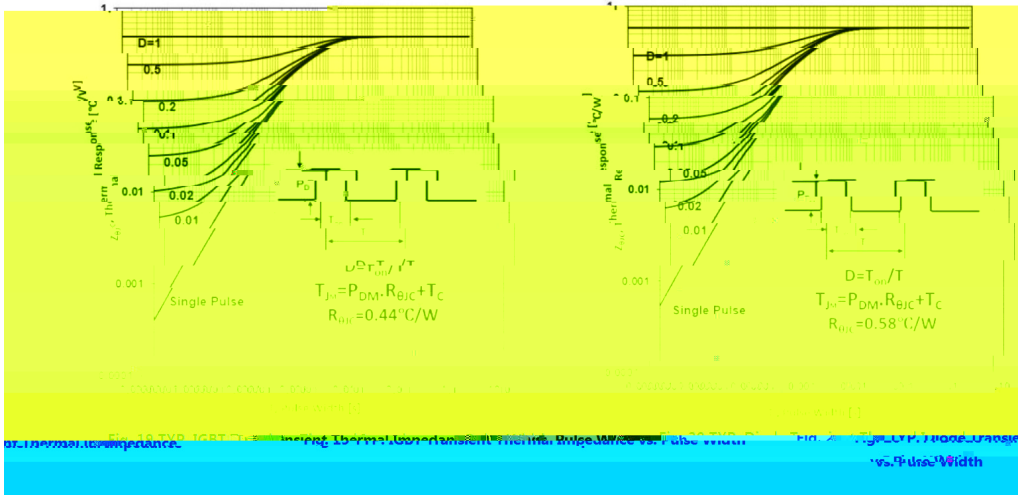
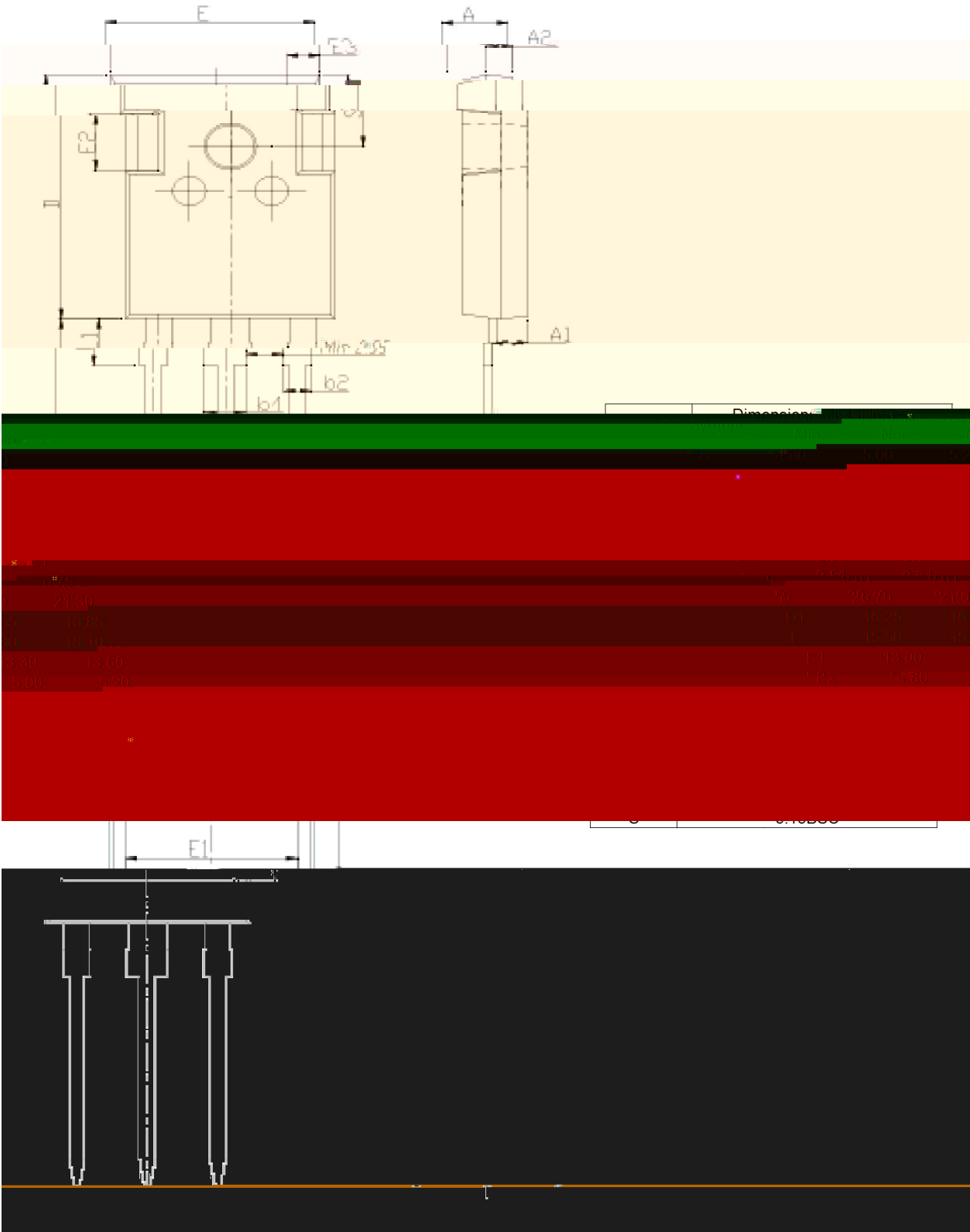


Fig. 21 TYP. Forward characteristic of Diode

/ Package Dimensions



/ Marking Instructions



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() / Temperature Profile for Dip Soldering(Pb-Free)

Note:

- | | | | |
|---|--------|-----------|---|
| 1 | 25 150 | 60 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | 2 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec
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/ Packaging SPEC.

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-247	30	15	450	5	2250	520×44×6	580×158×55	595 300 178