## "Yت / Descriptions

TO-247

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

## ◕ È / Features

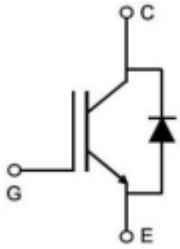
$V_{CES}$ =650V $I_C$ ($T_C$=100 )=75A

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

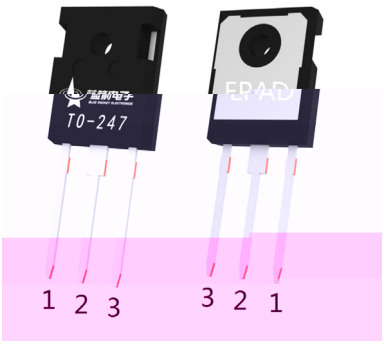
## ٧ ٍ / Applications

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

## Л ̃ ̊ ̈ ≠ ع / Equivalent Circuit




## ã ﻉ ٗ / Pinning




PIN1 G PIN 2 EPAD C PIN 3 E

## ﻁ. ʜ ؛ / Marking

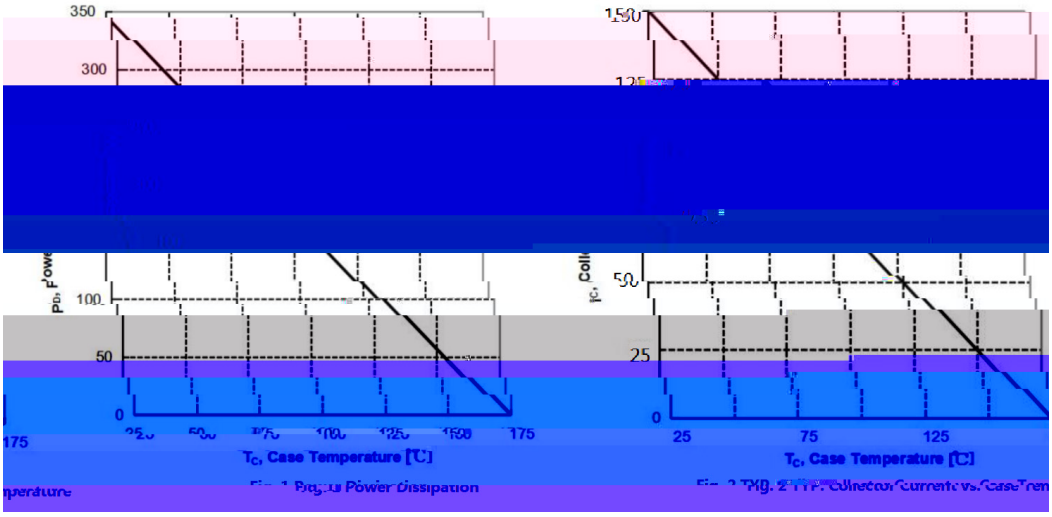
See Marking Instructions.

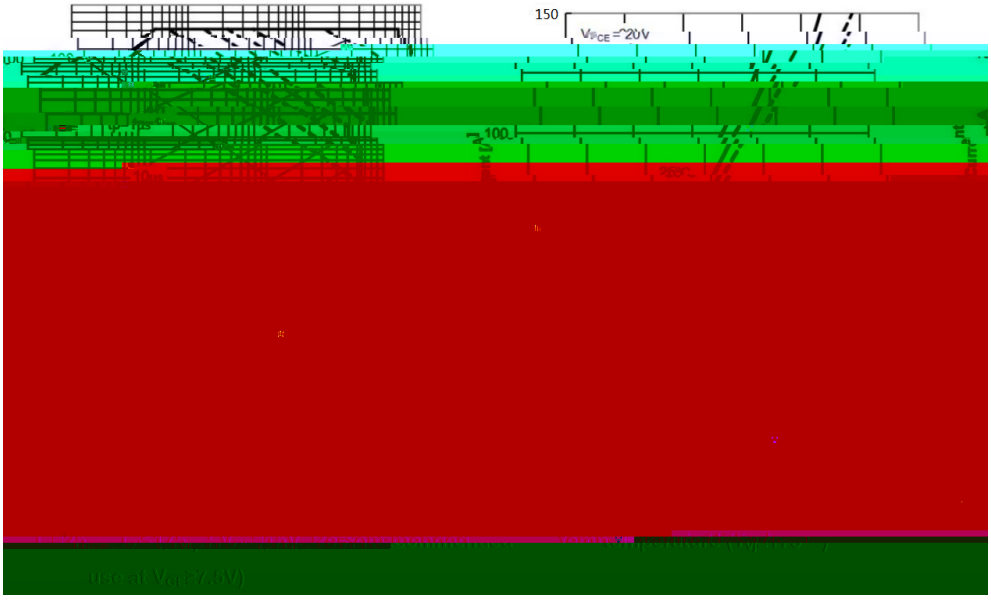
| r | | Symbol | Rating | Unit |
|---|---|---|---|---|
| | | $V_{CES}$ | 650 | V |
| | | $V_{GES}$ | 30 | V |
| t | $T_C$=25 | $I_C$ | 150 | A |
| | $T_C$=100 | | 75 | A |
| mited by $T_{Jmax}$ | | $I_{CM}$ | 300 | A |
| | $T_C$=25 | $I_F$ | 150 | A |
| | $T_C$=100 | | 75 | A |
| ward Current | | $I_{FRM}$ | 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 |

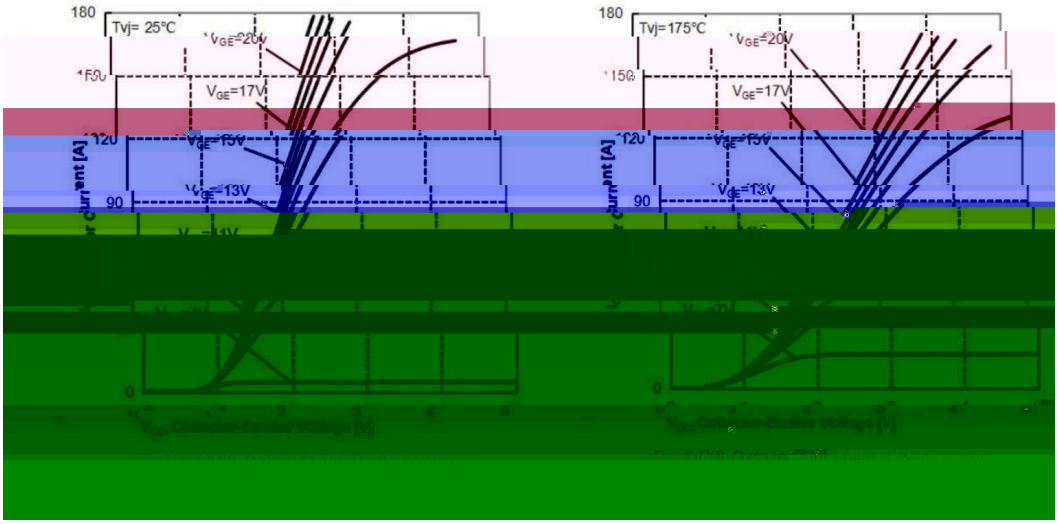
| | Symbol | Test Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| | $BV_{CES}$ | $I_C$=1mA, $V_{GE}$=0V | | 650 | | | V |
| rrent | $I_{CES}$ | $V_{CE}$=650V, $V_{GE}$=0V | | | | 10 | uA |
| | $I_{GES}$ | $V_{CE}$=0V, $V_{GE}$= ±20V | | | | 200 | nA |
| e | $V_{GE(th)}$ | $I_C$=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 |
| mJ |
| mJ |
| mJ |

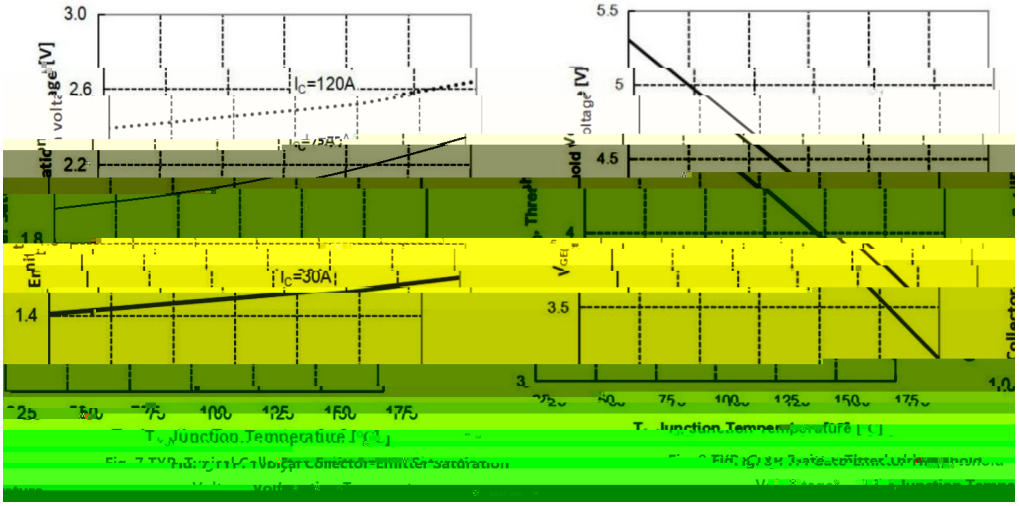
## ≠ ∃ ̃Ạ´E ∀ ∱ / Electrical Characteristic Curve

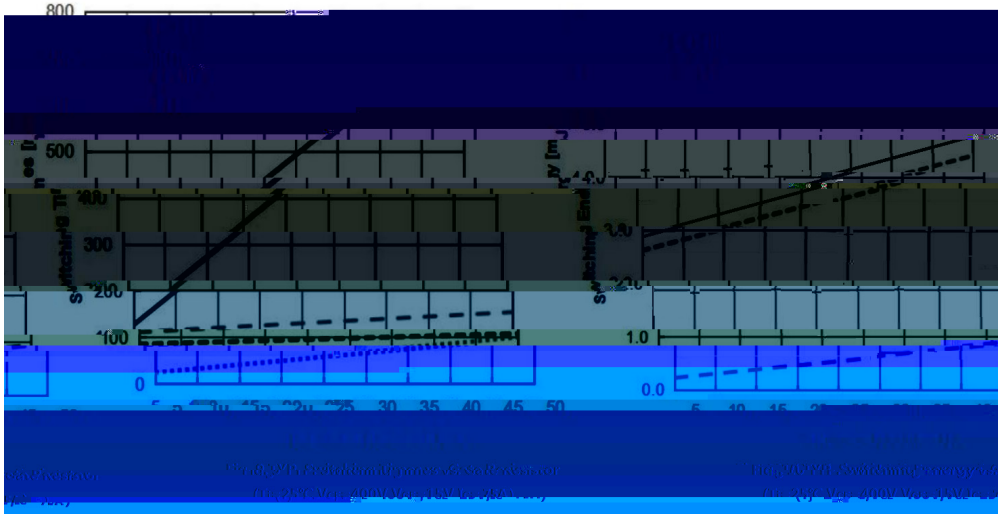


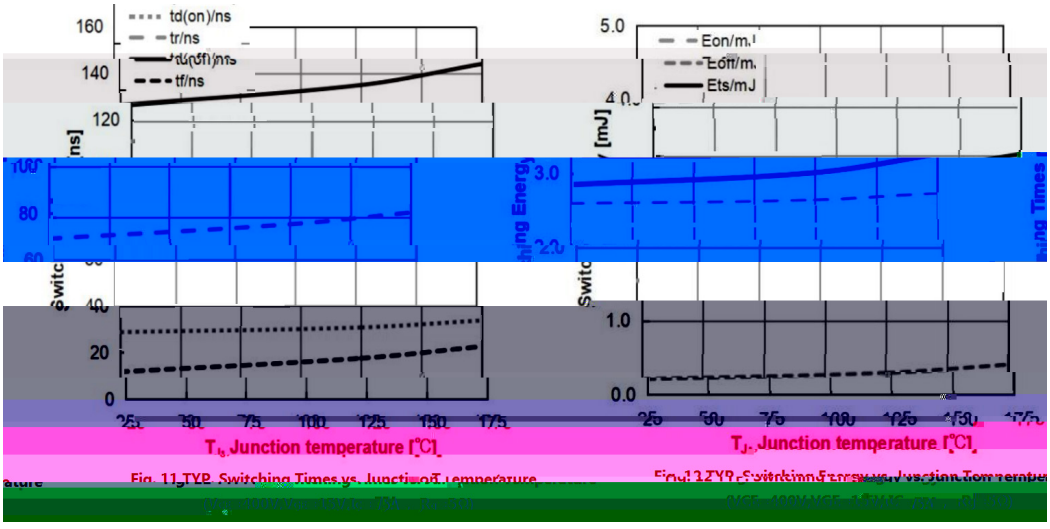



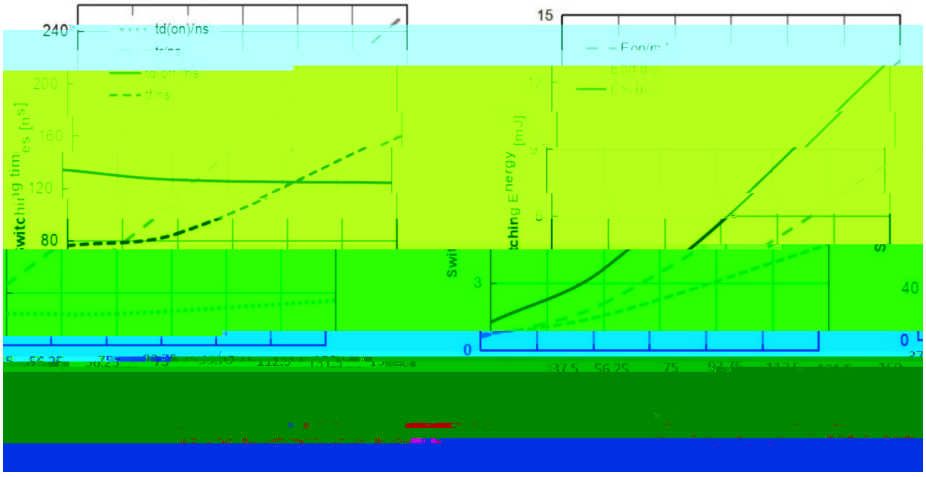
## ≠ ∃ ̃Ạ´E ∀ ƒ / Electrical Characteristic Curve

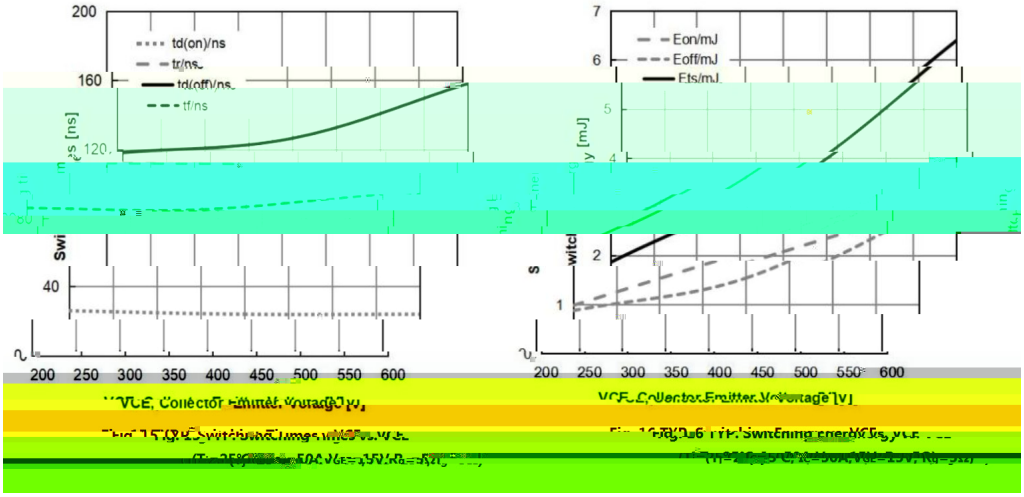


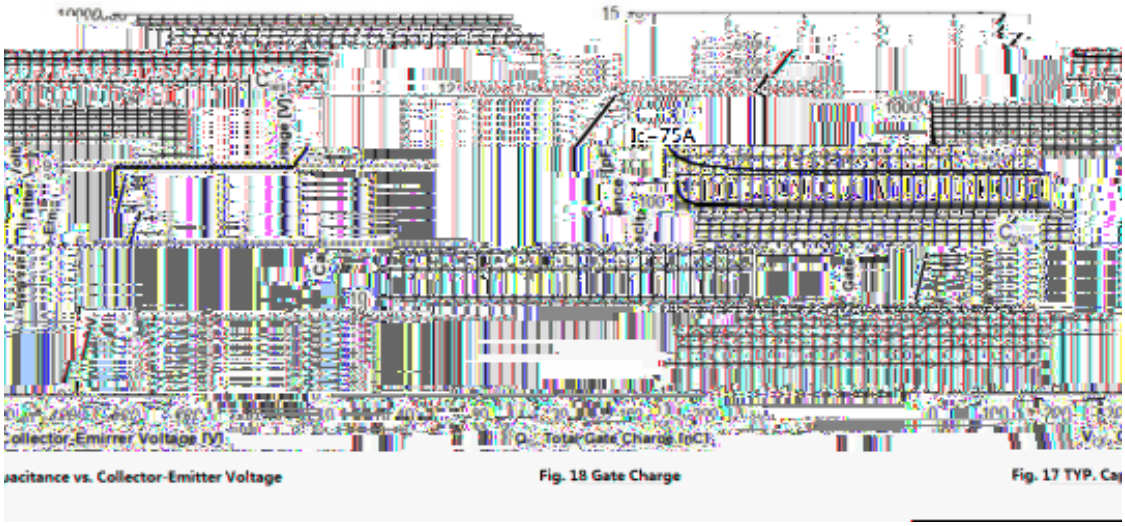



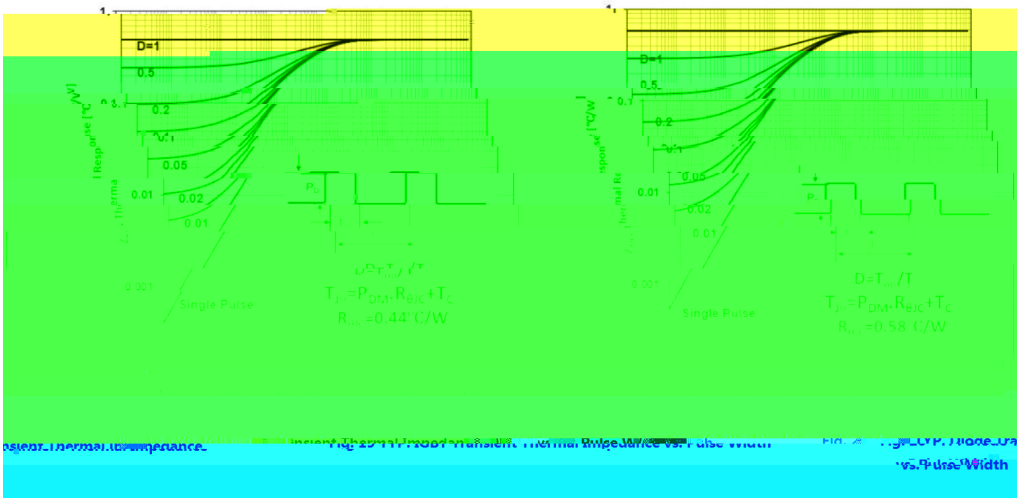
## ⁄ ∃ ˜Ą´E ¼ ƒ / Electrical Characteristic Curve

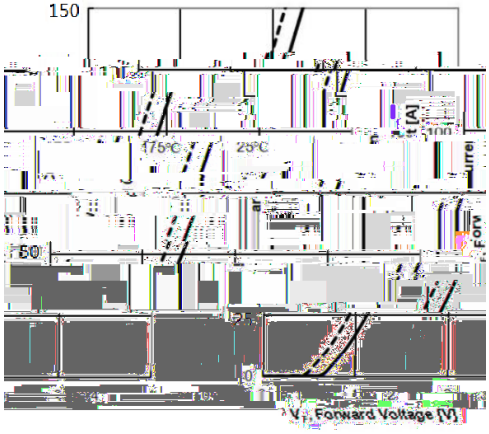


## ≠ ∃ ̃Ạ´E ∀ ∱ / Electrical Characteristic Curve

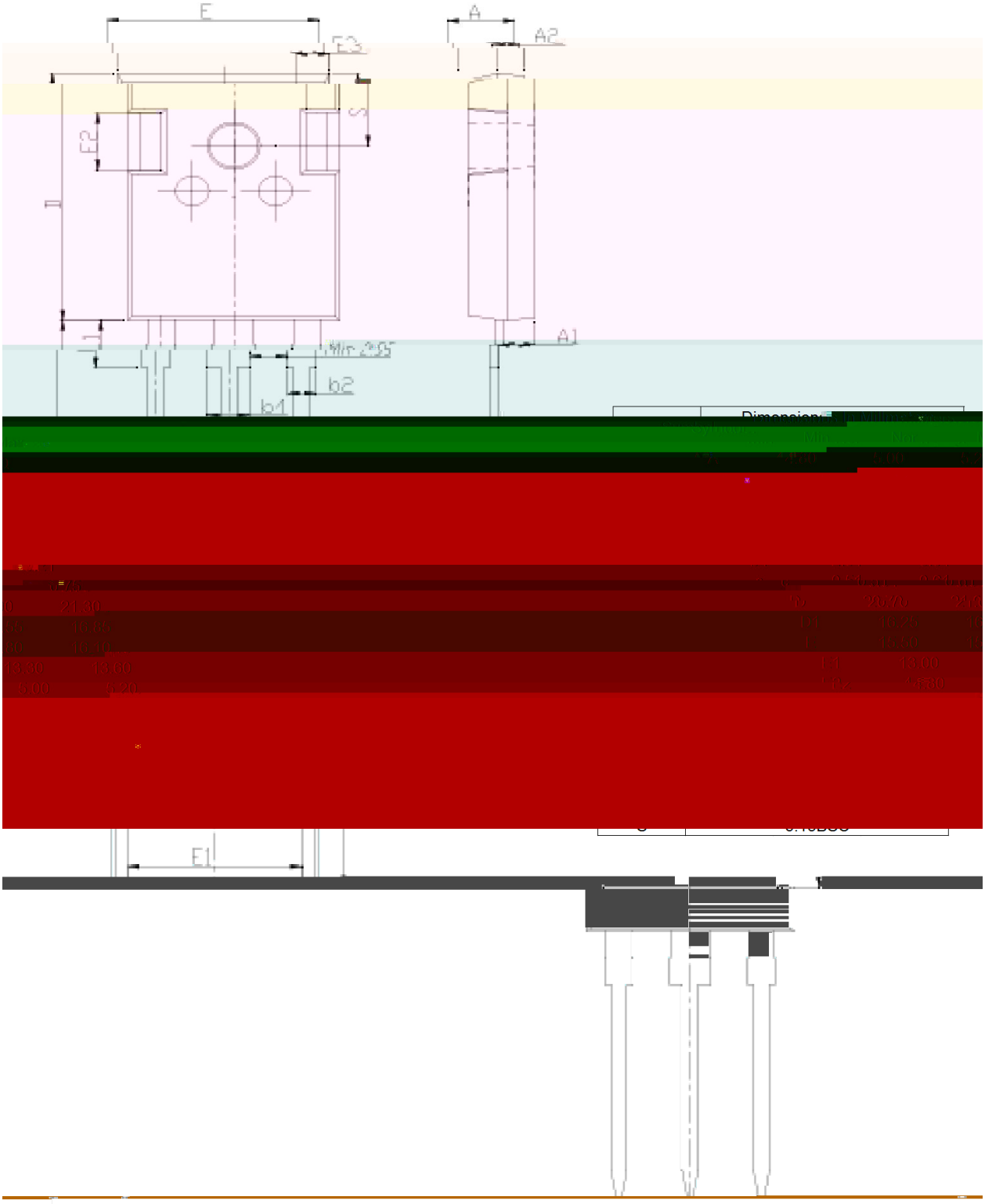


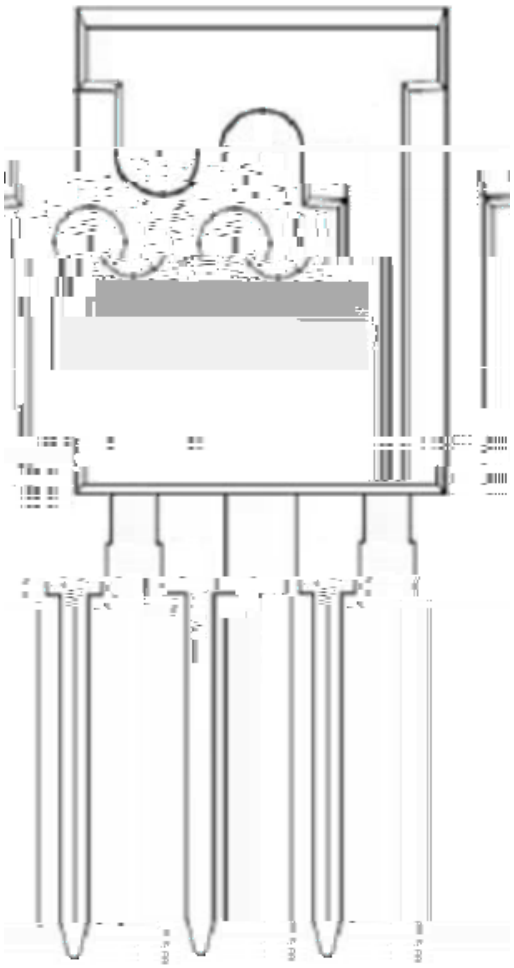

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Fig. 21 TYP. Forward characteris

## ᵘ Ė Ò Ļ ʃ / Package Dimensions



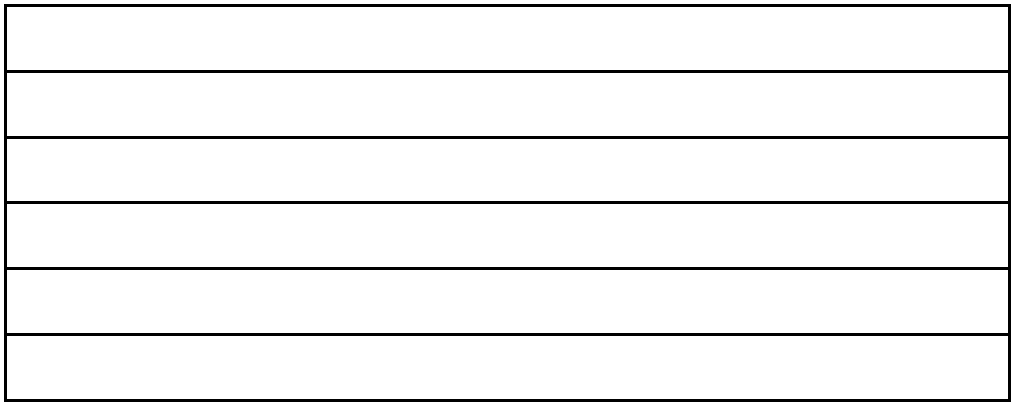
## ł. Ļ‘Ω / Marking Instructions



BR

GB75L65AH Ÿ ′ ‘ ŒE

## ↓ ș ╕ẘ´E ᛋ ƒ (ᾠ ᴣ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

| | | | | |
|---|---|---|---|---|
| 1 | 25 | 150 | 60 | 90sec; |
| 2 | 255±5 | | | 5±0.5sec; |
| 3 | | 2 | 10 | /sec. |

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

## ᛋ ŭ ɋ ̄ `Y Ţ / Resistance to Soldering Heat Test Conditions

| | | | |
|---|---|---|---|
| 270±5 | 10±1 sec. | Temp.:270±5 | Time:10±1 sec |

## ɒ Ŀ ᴄ— / Packaging SPEC.

/ TUBE

| Package Type | Units | | | | | Dimension | | (unit mm³) |
|---|---|---|---|---|---|---|---|---|
| | 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 |