/ Descriptions

TO-220FL ṂṂ Ḫ Ѧ ɻ ᴥ ‖ ὐ ч ᄀ

Insulated-Gate Bipolar Transistor in a TO-220FL Plastic Package

/ Features

650V/15A $V_{CE(SAT)}$= 1.60V(typ.) @I_C= 15A

ὃ ᔕ Ầ ʜ Fast Switching

Ḥ $V_{CE(SAT)}$ Low $V_{CE(SAT)}$

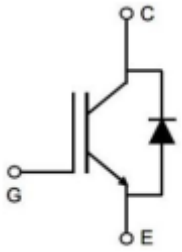
ῆ ғ β HF Product.

/ Applications

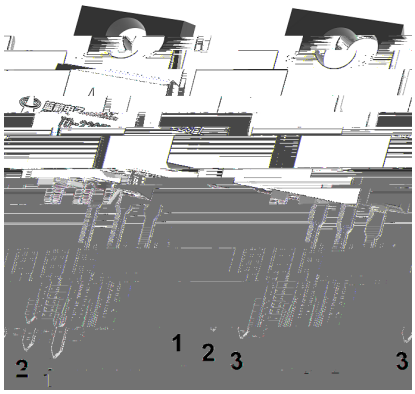
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Motor Drives, OBC,PTC.

/ Equivalent Circuit



/ Pinning



PIN1 χ G PIN 2 χ C PIN 3 χ E

/ Marking

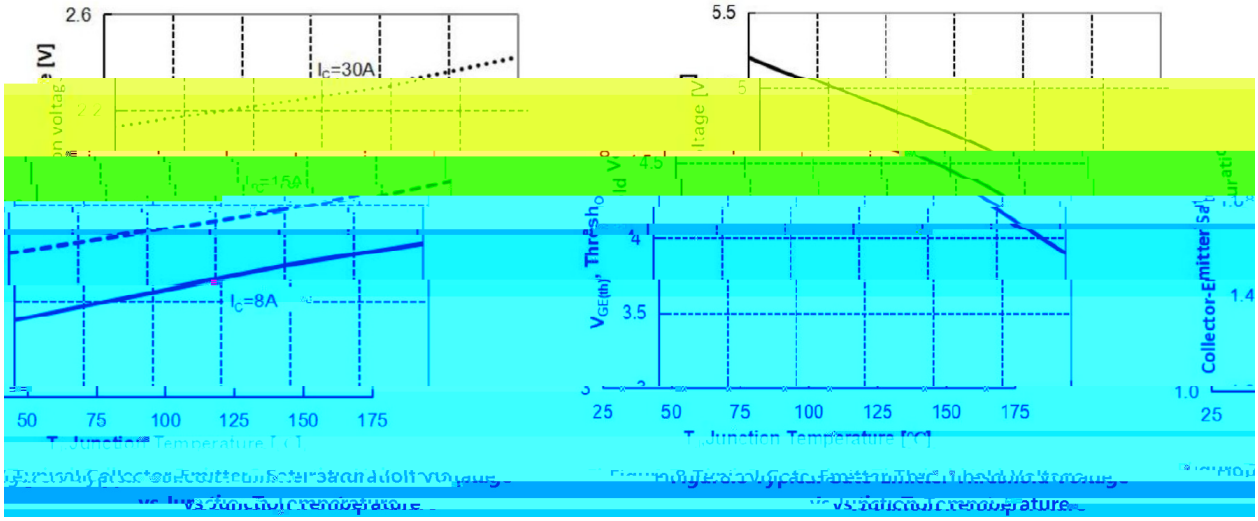
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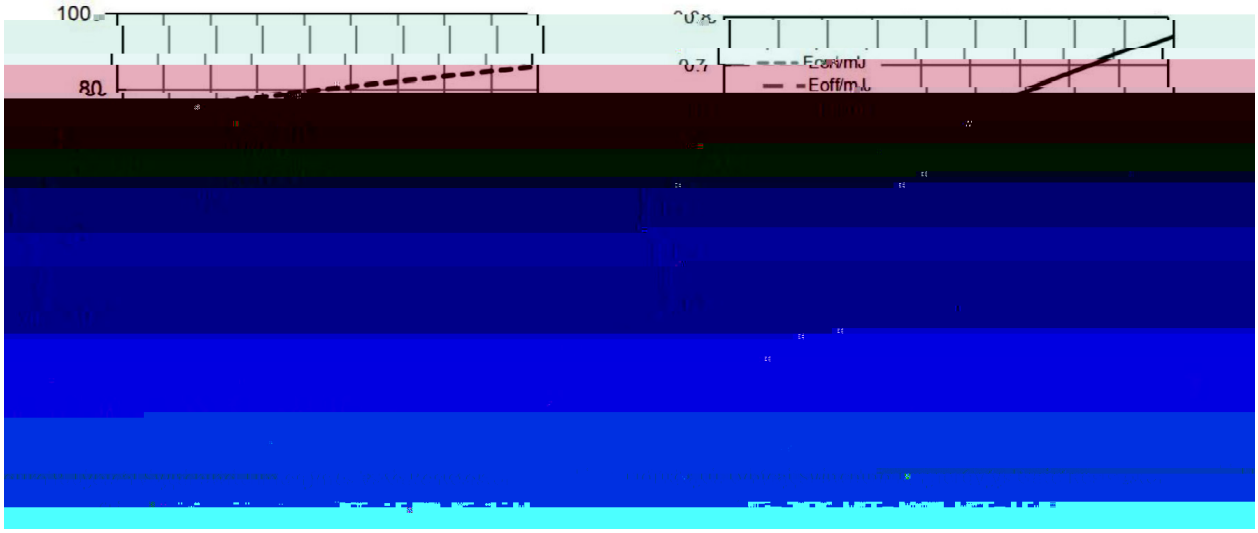
See Marking Instructions.

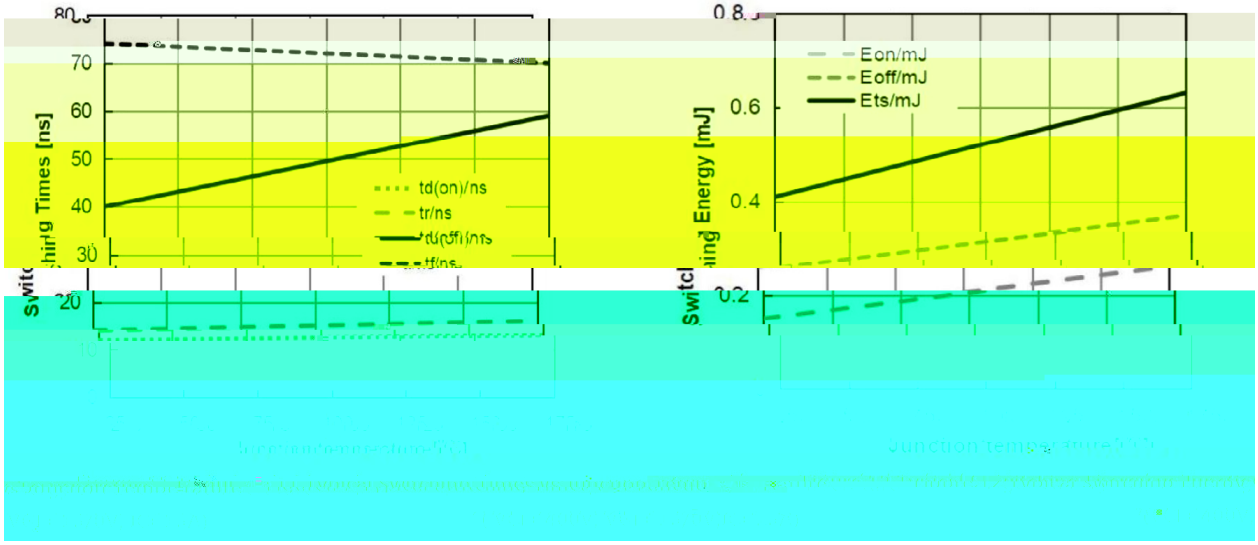
v ̈Ω Parameter		↿ N Symbol	̈Ω Ö Rating	D Ч Unit
Collector-Emitter Voltage		V_{CES}	650	V
Gate-Emitter Voltage		V_{GES}	± 30	V
Continuous Collector Current	T_C=+25	I_C	30	A
	T_C=+100		15	A

v ̈Ω Parameter	ϒ N Symbol	╨ :ˆ ϯ Test Conditions	ѡ ṇ Ө Min	Ɛ ȝ Ө Typ	ѡ ᶻ Ө Max	ᴅ Ꮒ Unit
Input Capacitance	C_{ies}	V_{GE}=0V, V_{CE}=25V, f=1MHz		791		pF
Output Capacitance	C_{oes}			130		pF
Reverse Transfer Capacitance	C_{res}			33		pF
Total Gate Charge	Q_g	V_{GE}=15V, V_{CC}=520V, I_C=15A		45		nC
Gate to Emitter Charge	Q_{ge}			7		nC
Gate to Collector Charge	Q_{gc}			23		nC
Turn-On Delay Time	$t_{d(on)}$	T_J=25 , V_{GE}=15V,V_{CC}=400V, I_C=15A, R_G=5Ω Inductive Load		12		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			40		ns
Turn-Off Fall Time	t_f			74		ns
Turn-On Energy	E_{on}			0.15		mJ
Turn-Off Energy	E_{off}			0.26		mJ
Total Switching Energy	E_{ts}					

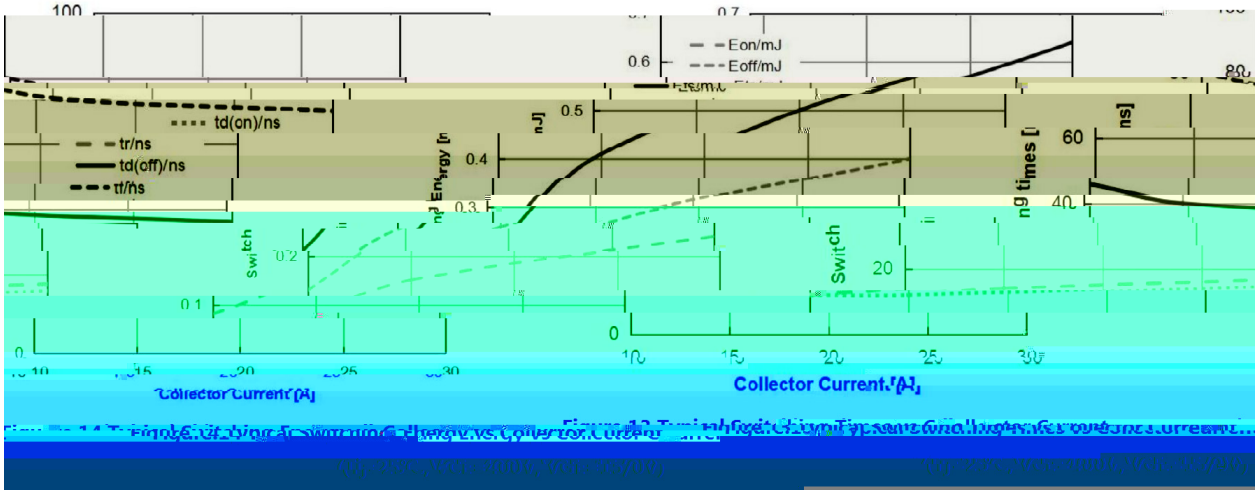
/ Electrical Characteristic Curve

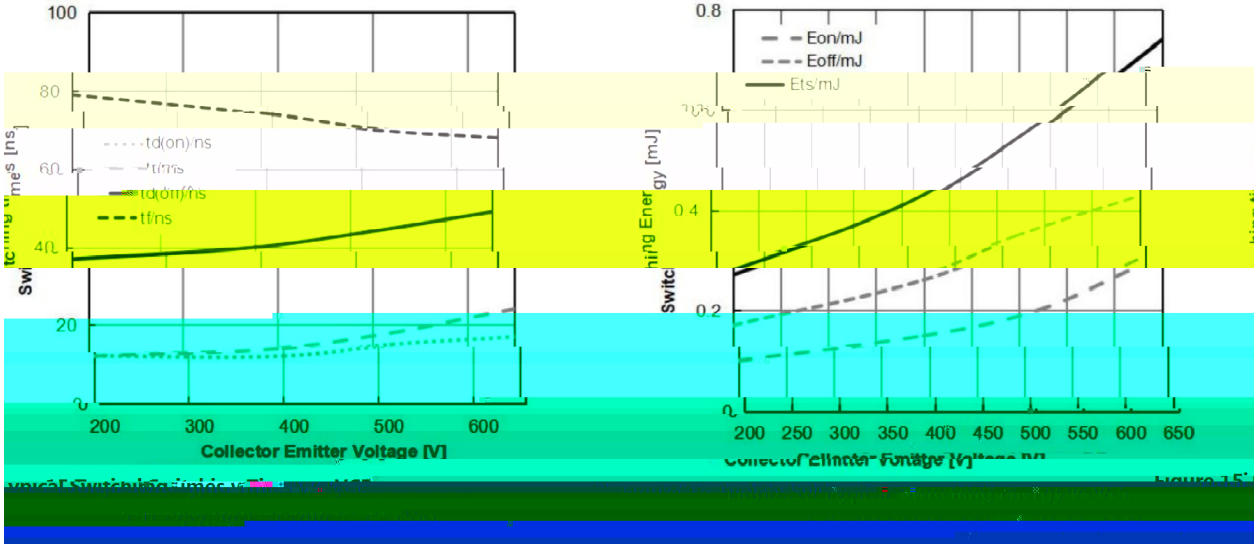


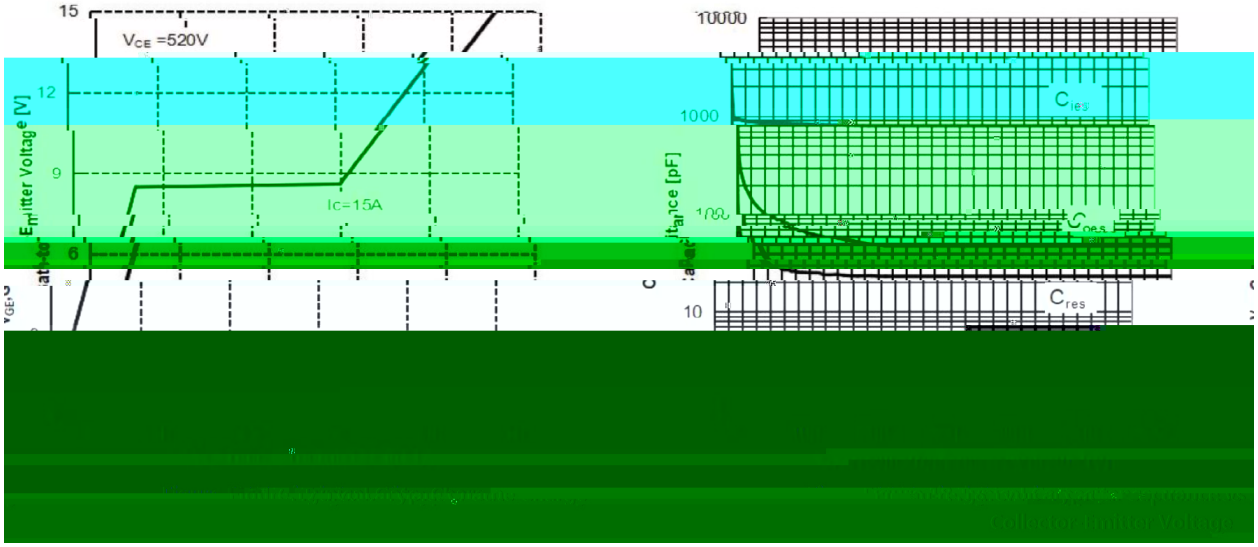




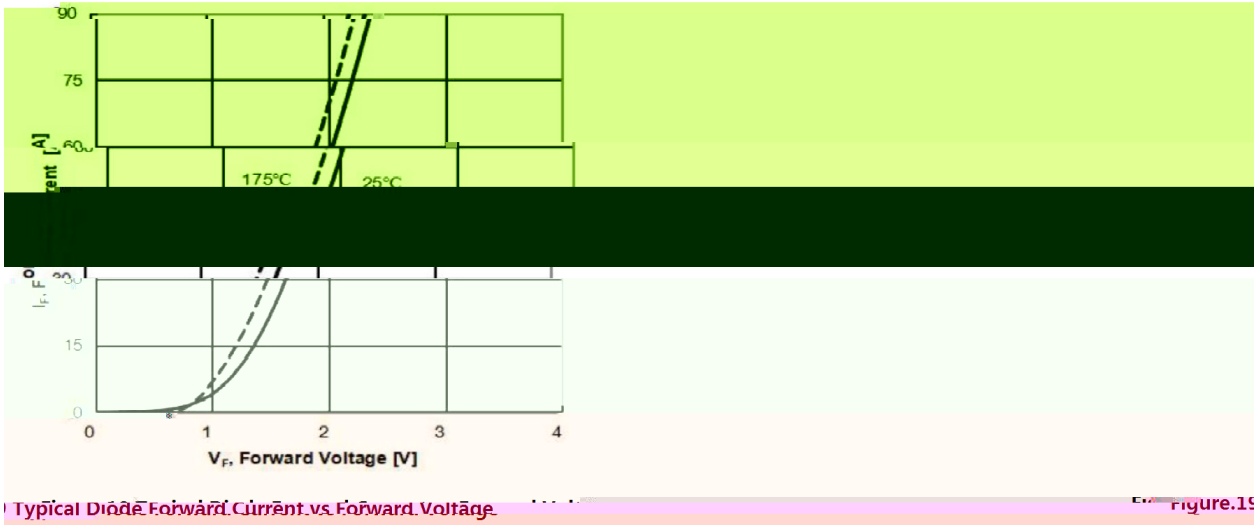
/ Electrical Characteristic Curve





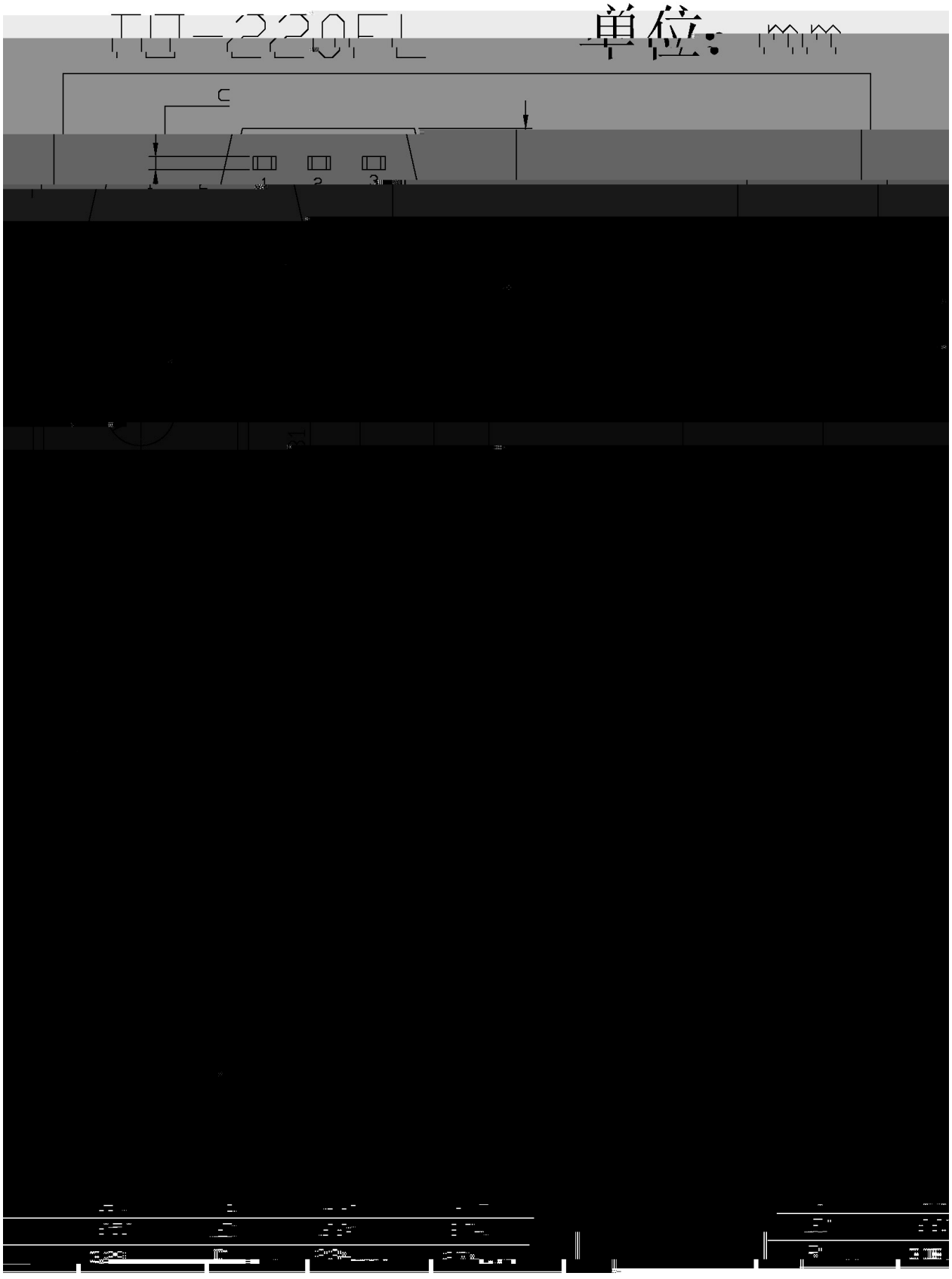


/ Electrical Characteristic Curve

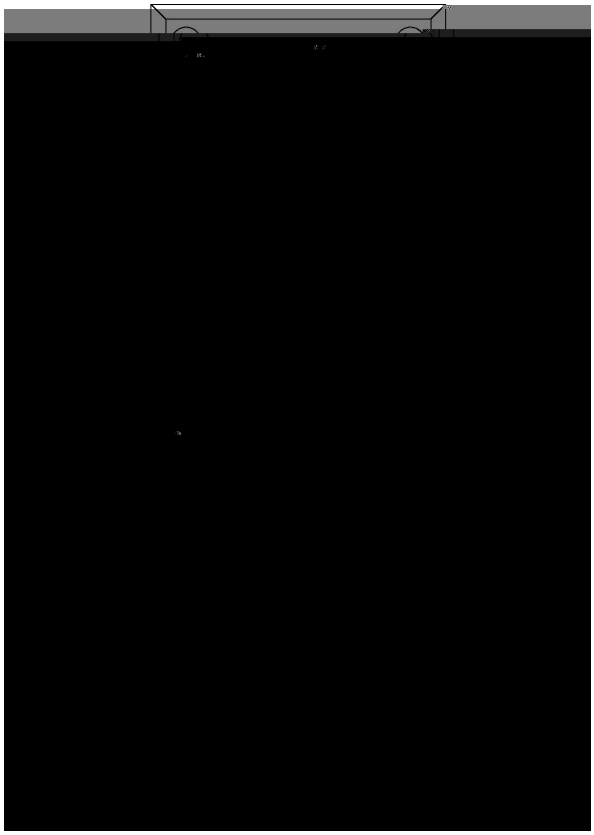


Typical Diode Forward Current vs Forward Voltage

/ Package Dimensions



/ Marking Instructions

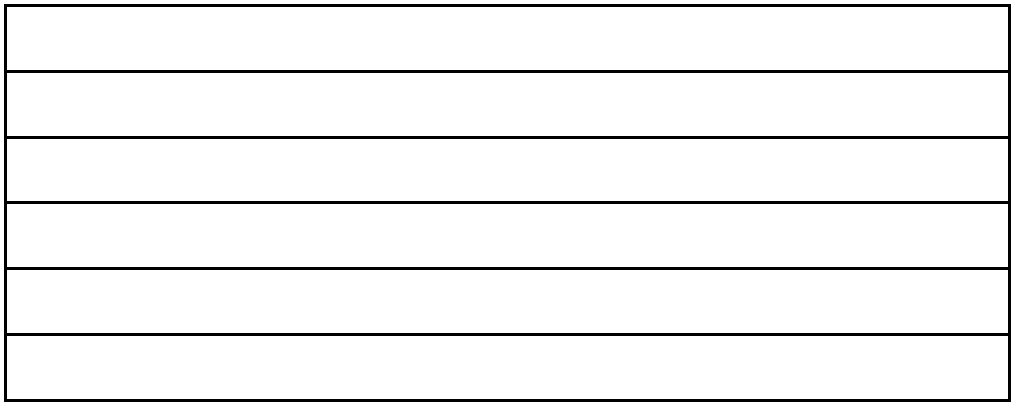


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BR χ	ᚙ ϛ ᴎ Γϧ
GB15N65 χ	ᚙ ʒ ᴺ Γϧ
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Note:

BR:	Company Code
GB15NN65:	Product Type Code
****:	Lot No. Code, code change with Lot No

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



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1 Ĺ ♬ □ ẙ 25 Ḱ 150 ł ı `H ڑ 60 Ḱ 90sec;

2 Š Ë □ ẙ 255 ° 5 ł ı `H ڑ `Y ∧ ₦ 5 ° 0.5sec;

3 ì ˙ ٧ ¸ ɔ ﷺ ẙ ₦ 2 Ḱ 10 ł /sec.

Note:

1.Preheating:25~150 ł , Time:60~90sec.

2.Peak Temp.:255 ° 5 ł , Duration:5 ° 0.5sec.

3. Cooling Speed: 2~10 ł /sec.

/ Resistance to Soldering Heat Test Conditions

705 ° 5 ł ɣ 10 ° (T)10769(e)147(m(.:70±55)]TJ/T107 1 Tf5.05757 0 TD0 Tc0 Tw
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