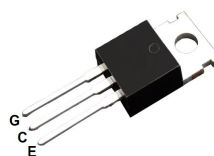
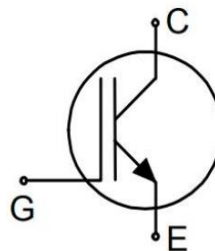


MAIN CHARACTERISTICS

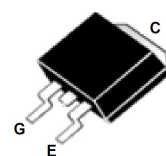
I_C @TC=100℃	75A
V_{CE}	650V
$V_{CE(sat)}$ -typ	1.8V

FEATURES

- Trench and field-stop technology
- Easy parallel switching capability



TO-220C



TO-263C

APPLICATIONS

- Hair removal device
- Flash light

MECHANICAL DATA

- Case: Molded plastic
- Mounting Position: Any
- Molded Plastic: UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275℃ maximum, 10s per JESD 22-B106

Product specification classification

Part Number	Package	Mode Name	Pack
LGT75N65P	TO-220C	LGT75N65TP	Tube
LGT75N65T	TO-263C	LGT75N65T	Tube

Maximum Ratings

Characteristics	Symbol	Value	Unit
		220C/263C	
Collector-emitter voltage	V_{CES}	650	V
Gate-emitter voltage	V_{GES}	± 20	V
Continuous collector current (TC=25°C)	I_C	150	A
Continuous collector current (TC=100°C)		75	A
Pulsed collector current, tp limited by Tvjmax	I_{CM}	300	A
Diode continuous forward current (TC=100°C)	I_F	75	A
Diode maximum current, tp limited by Tvjmax	I_{FM}	150	A
Power dissipation (TC=25°C)	P_{tot}	375	W
Power dissipation (TC=100°C)		187	W
Operating junction temperature range	T_{vj}	-40 to +175	°C
Storage temperature range	T_{stg}	-55 to +150	°C

Thermal characteristics

Characteristics	Symbol	Values		Unit
		Typ	Max.	
Thermal resistance, junction to case for IGBT	$R_{th(j-c)}$	-	0.4	°C/W
Thermal resistance, junction to ambient	$R_{th(j-a)}$	-	40	°C/W

Note1:Pulse test: 300 μ s pulse width, 2 % duty cycle

Electrical characteristics of IGBT at Tvj=25°C unless otherwise specified

Static characteristics

Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{GE}=0V, I_C=250\mu A$	BV_{CES}	650	-	-	V
Collector-emitter leakage current	$V_{CE}=650V, V_{GE}=0V$	I_{CES}	-	-	50	μA
Gate leakage current, forward	$V_{GE}=\pm 20V, V_{CE}=0V$	I_{GES}	-	-	± 100	nA
Gate-emitter threshold voltage	$V_{GE}=V_{CE}, I_C=1mA$	$V_{GE(th)}$	5	5.4	5.6	V
Collector-emitter saturation voltage	$V_{GE}=15V, I_C=75A$	$V_{CE(sat)}$	-	1.8	-	V
	$V_{GE}=15V, I_C=75A, T_{vj}=175^\circ C$		-	2.3	-	V

Dynamic characteristics

Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Input capacitance	$V_{CE}=30V$	C_{ies}	-	4250	-	pF
Output capacitance	$V_{GE}=0V$	C_{oes}	-	205	-	pF
Reverse transfer capacitance	$f=1MHz$	C_{res}	-	31	-	pF
Total gate charge	$V_{CC}=520V, V_{GE}=15V, I_C=75A$	Q_g	-	130	-	nC

Electrical characteristics of IGBT at $T_{vj}=25^{\circ}\text{C}$ unless otherwise specified

Switching characteristics

Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Turn-on delay time	$V_{CC}=400\text{V}$ $V_{GE}=15\text{V}$ $I_C=75\text{A}$ $R_G=10\Omega$ Inductive load	td(on)	-	53	-	ns
Rise time		tr	-	132	-	ns
Turn-off delay time		td(off)	-	162	-	ns
Fall time		tf	-	95	-	ns
Turn-on energy		Eon	-	3.3	-	mJ
Turn-off energy		Eoff	-	2.2	-	mJ
Turn-on delay time	$V_{CC}=400\text{V}$ $V_{GE}=15\text{V}$ $I_C=75\text{A}$ $R_G=10\Omega$ Inductive load $T_{vj}=175^{\circ}\text{C}$	td(on)	-	53	-	ns
Rise time		tr	-	128	-	ns
Turn-off delay time		td(off)	-	181	-	ns
Fall time		tf	-	107	-	ns
Turn-on energy		Eon	-	4.8	-	mJ
Turn-off energy		Eoff	-	2.7	-	mJ

RATINGS AND CHARACTERISTIC CURVES

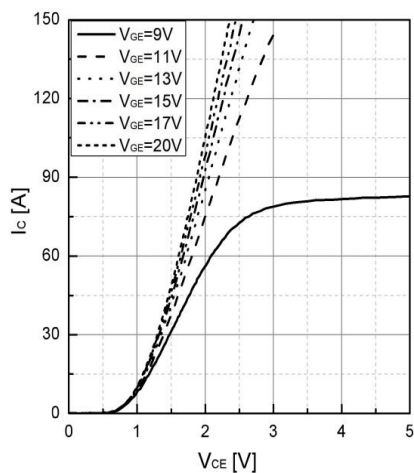


Fig 1. Typical output characteristic ($T_{vj}=25^{\circ}\text{C}$)

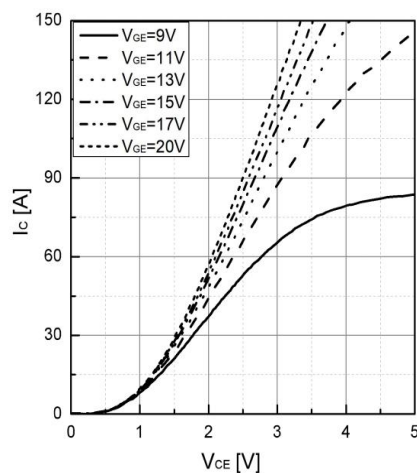


Fig 2. Typical output characteristic ($T_{vj}=175^{\circ}\text{C}$)

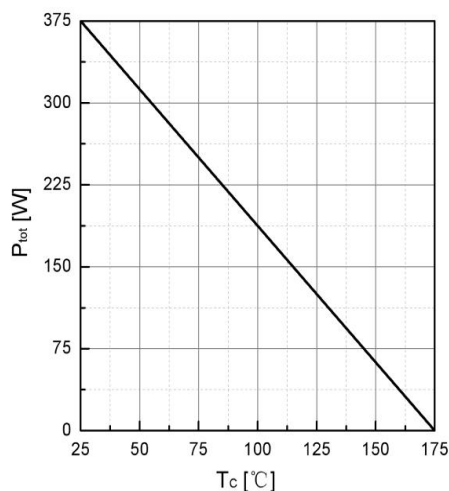


Fig 3. Power dissipation as a function of T_c

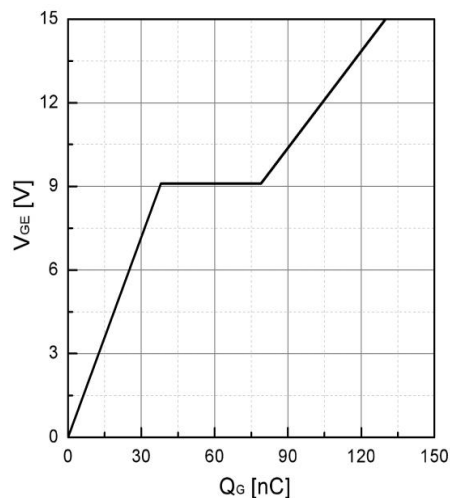


Fig 4. Typical Gate charge

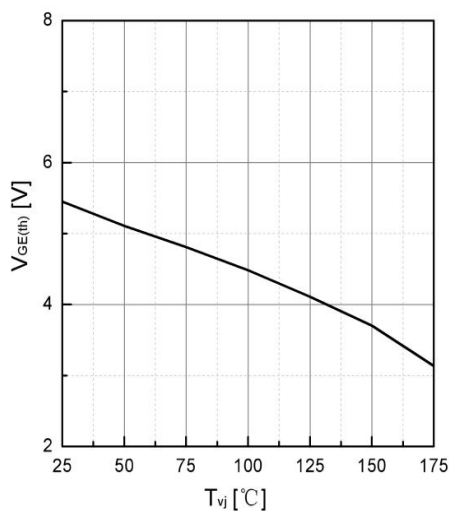


Fig 5. Typical $V_{GE(th)}$ as a function of T_{vj}
($I_c=1\text{mA}$)

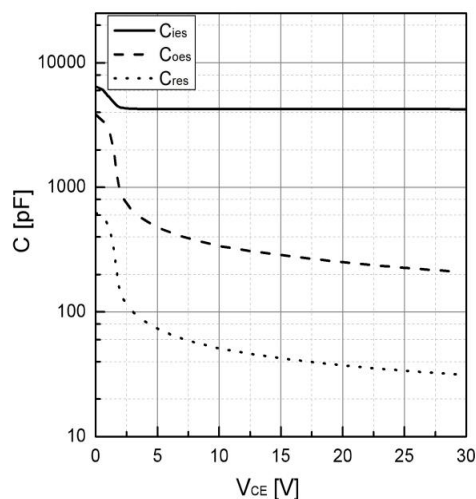


Fig 6. Typical capacitance as a function of V_c
($f=1\text{MHz}$, $V_{GE}=0\text{V}$)

RATINGS AND CHARACTERISTIC CURVES

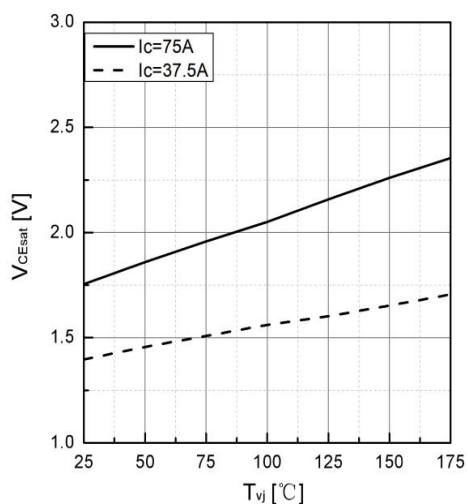


Fig 7. Typical V_{CESat} as a function of T_{vj}

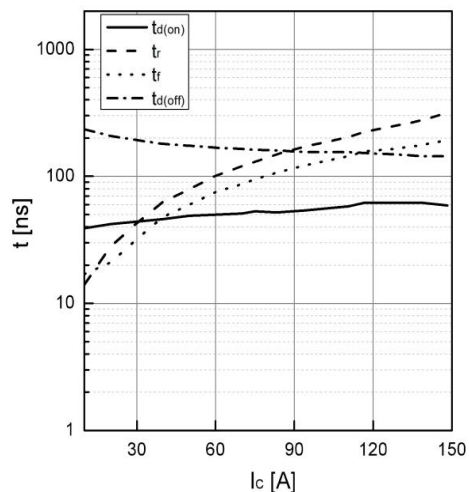


Fig 8. Typical switching time as a function of I_C

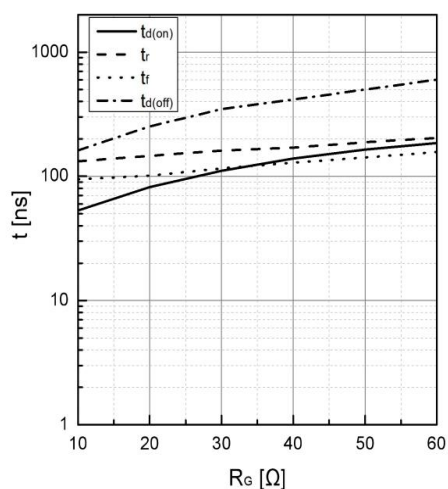


Fig 9. Typical switching times as a function of R_G

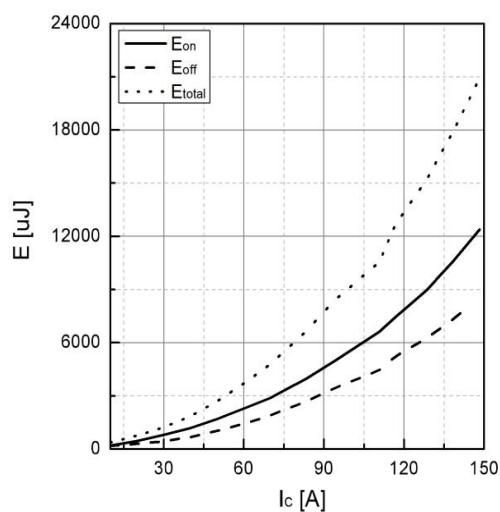


Fig 10. Typical switching energy losses as a function of I_C

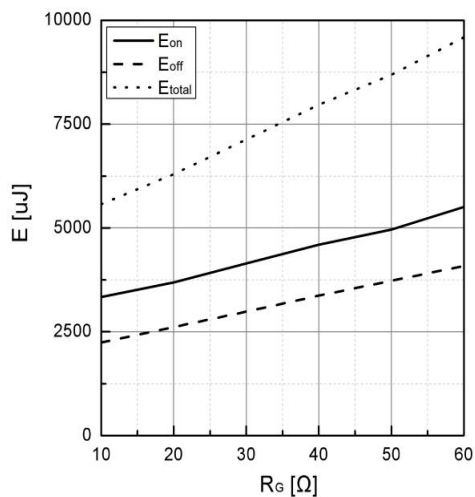
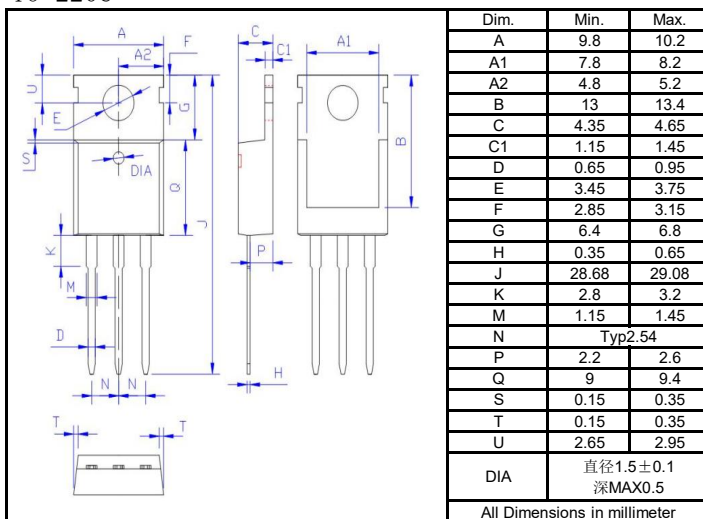


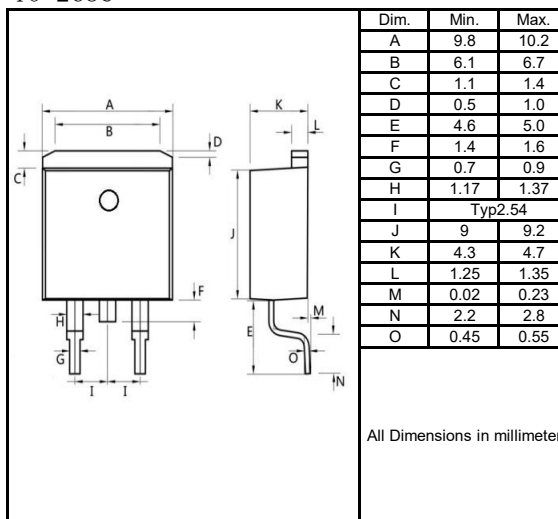
Fig 11. Typical switching energy losses as a function of R_G

Package Outline Dimensions millimeters

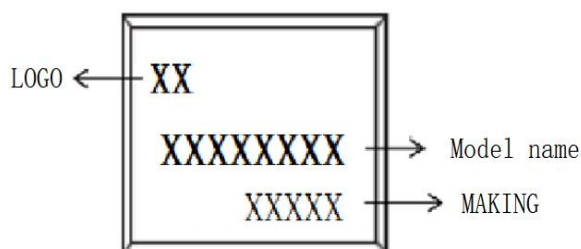
TO-220C



TO-263C



Marking on the body

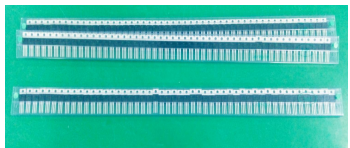
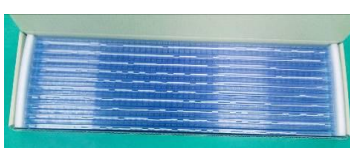


MAKING:

X X X XX

- Assembly code (e.g : AB,CD,.....)
- Material -Code
(H:No halogen A:ordinary)
- month - code (WW: 1-1, 10-A...)
- Year - code
(Y: Last digit of year & A:2012,B:2013. ...)

packing instruction

PKG	最小包装	内盒	外箱
TO-220C TO-263C			
	50PCS/管	1000pcs/盒	5000pcs/箱
TO-263C			
	800pcs/盘	1600pcs/盒	8000pcs/箱

Notice

All product,product specifications and data are subject to change without notice to improve.The right to explain is owned by LINGXUN company.

Confirm that operation temperature is within the specified range described in the product specification. Avoid applying poer exceeding poer; exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.

LINGXUN electronics shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in t