BRGB40L65AHA

DATA SHEET

/ Absolute Maximum Ratings(Ta=25)

			±	
		Θ		
		Θ		

/ Electrical Characteristics(Ta=25)

					±	
			μ			

/ Electrical Characteristics(Ta=25)

		Ω				
		≤ ≤				μ

/ Electrical Characteristic Curve

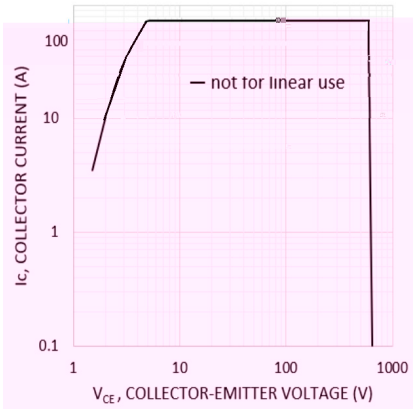


Fig.1 Collector Current vs. Collector-Emitter Voltage

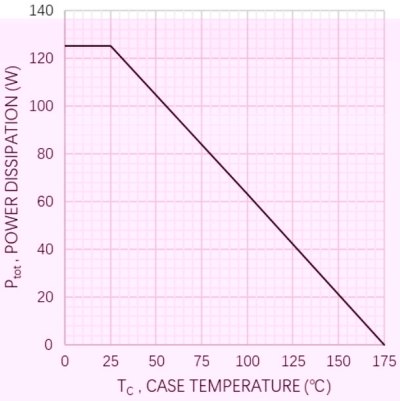


Fig.2 Power Dissipation...

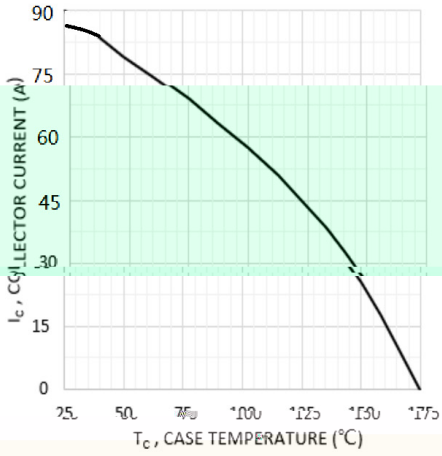


Fig.3 Collector current as a function of case temperature (V_{GE}≥15V, T_{vj}≤175℃)

r_G=39Ω

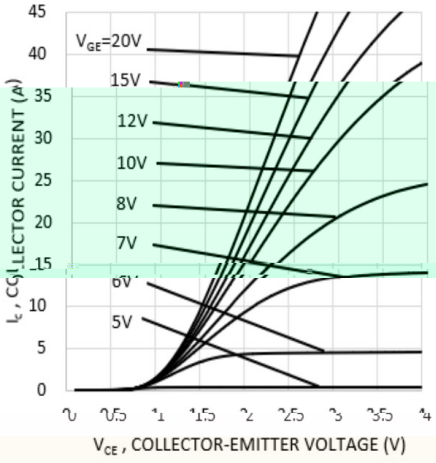
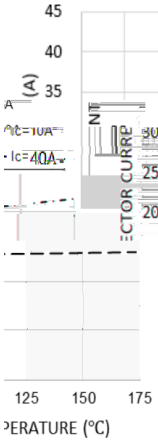


Fig.4 Typical output characteristic (T_{vj}=25℃)



aturation voltage
emperature

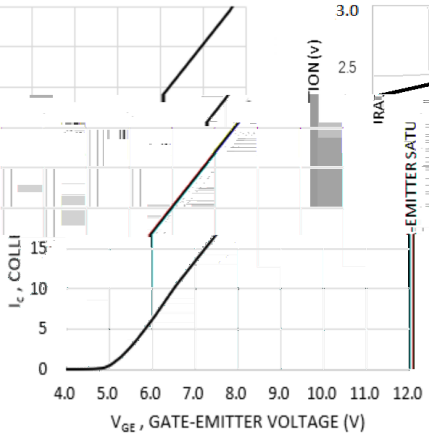


Fig. 5 Typical transfer characteristics (V_{CE}=20V)

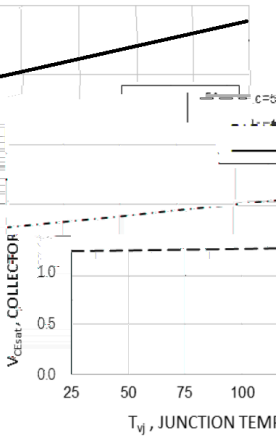
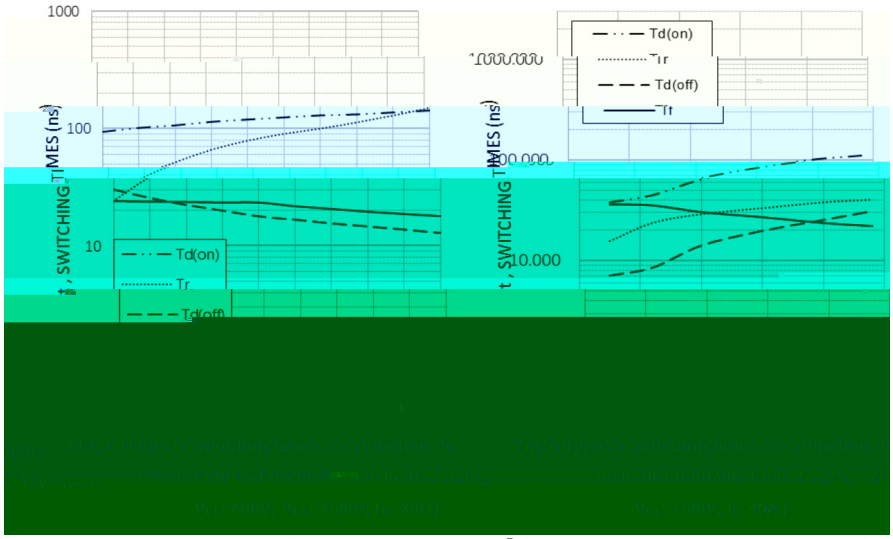


Fig. 6 Typical collector-emitter s
as a function of junction te
(V_{GE}=15V)

/ Electrical Characteristic Curve



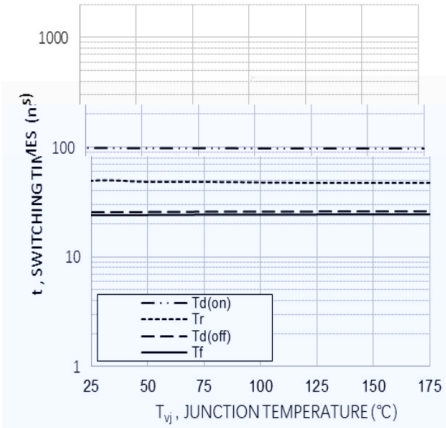


Fig.9 Typical switching times as a function of junction temperature (inductive load, V_{CE}=400V, V_{GE}=15/0V, I_C=40A, r_G=39Ω)

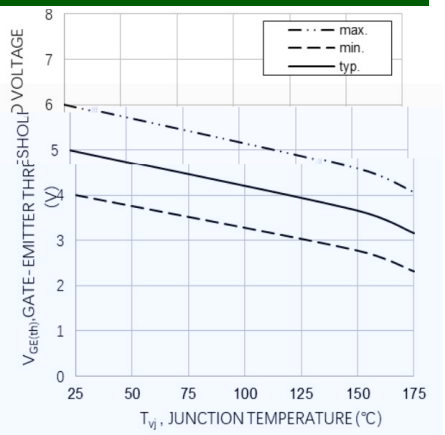


Fig.10 Gate-emitter threshold voltage as a function of junction temperature (I_C=0.15mA)

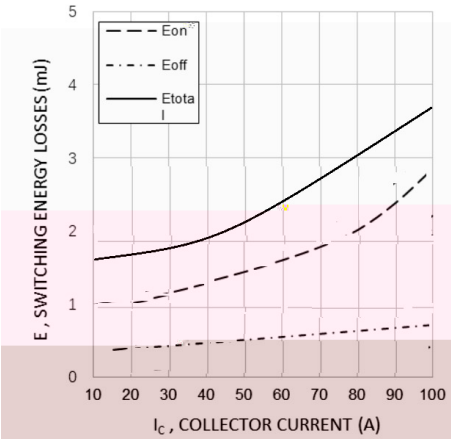


Fig.11 Typical switching energy losses as a function of collector current (inductive load, T_{vj}=25℃, V_{CE}=400V, V_{GE}=15/0V, r_G=39Ω)

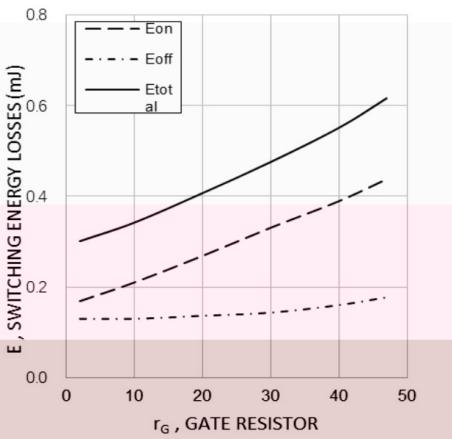


Fig.12 Typical switching energy losses as a function of gate resistor (inductive load, T_{vj}=25℃, V_{CE}=400V, V_{GE}=15/0V, I_C=40A)

/ Electrical Characteristic Curve

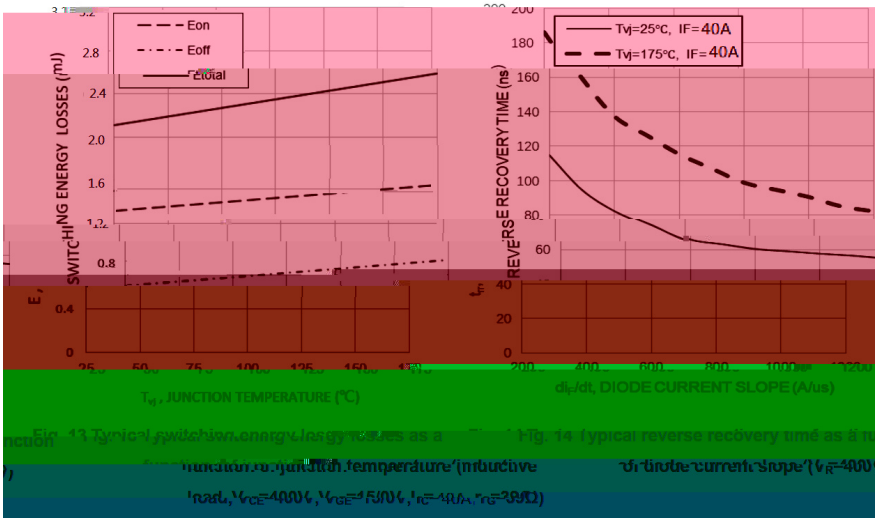


Fig. 13 Typical switching energy losses as a function of junction temperature (inductive load, V_{CE}=400V, V_{GE}=15V, I_C=40A, R_G=39Ω)

Fig. 14 Typical reverse recovery time as a function of diode current slope (V_R=400V)

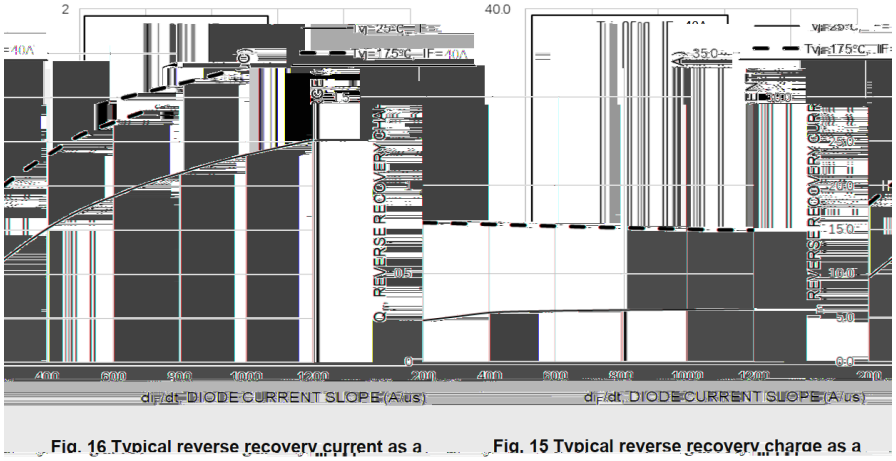


Fig. 16 Typical reverse recovery current as a function of diode current slope (V_R=400V)

Fig. 15 Typical reverse recovery charge as a function of diode cu

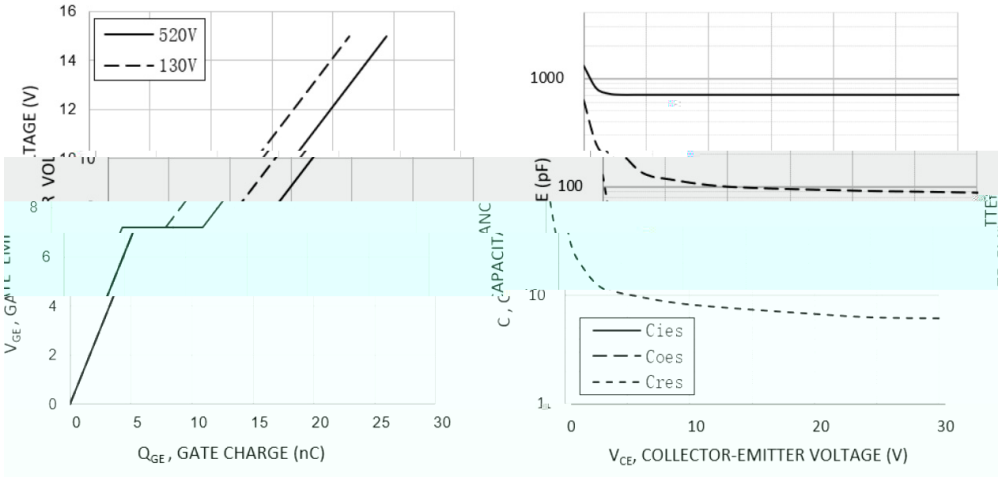


Fig. 17 Typical gate charge (I_C=40A)

Fig. 18 Typical capacitance as a function of collector-emitter voltage (V_{GE}=0V, f=1

/ Electrical Characteristic Curve

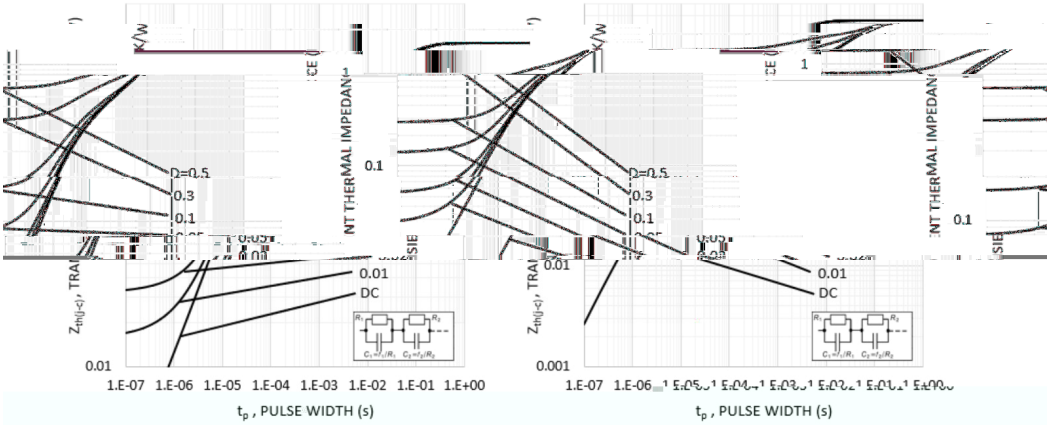
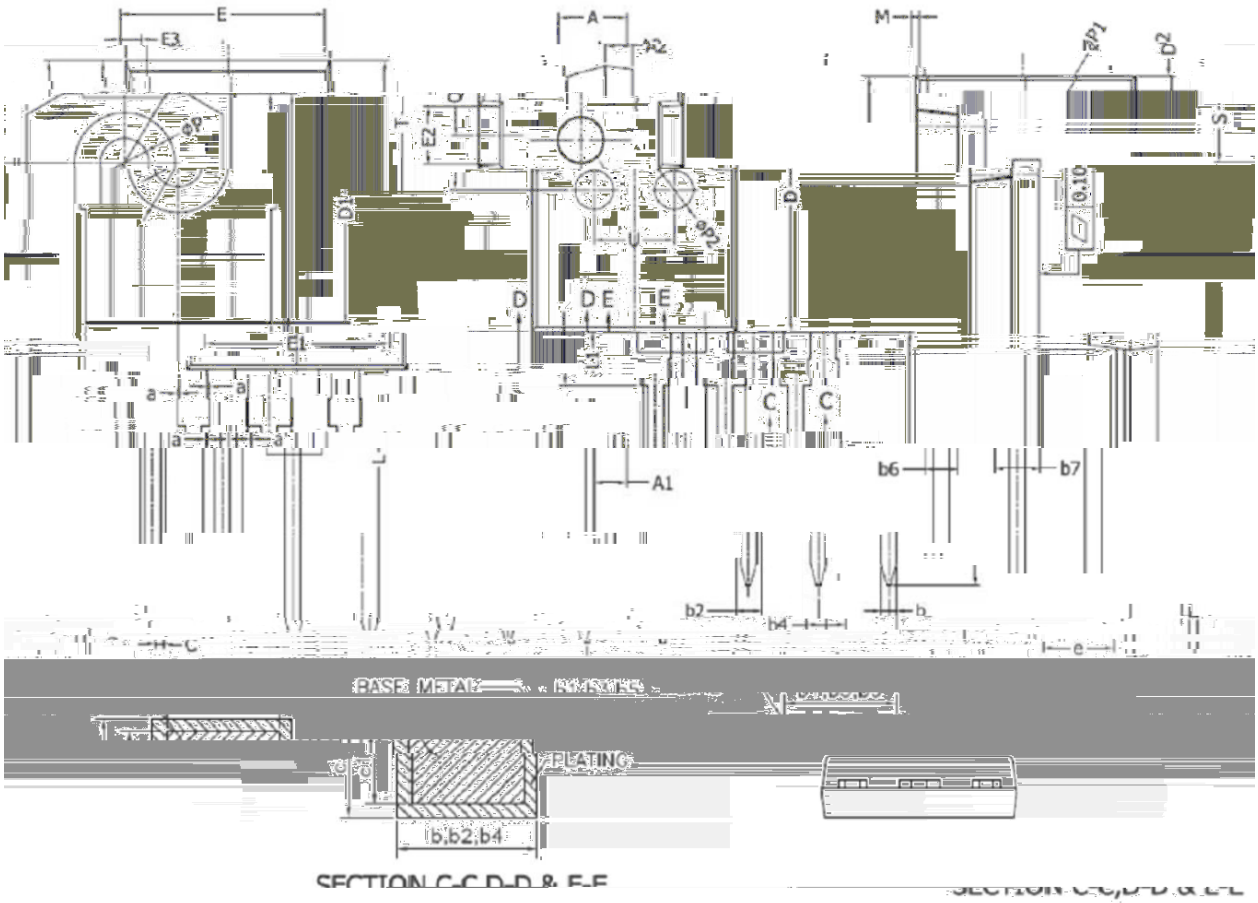


Fig. 19 IGBT transient thermal impedance ($D=t_p/T$)

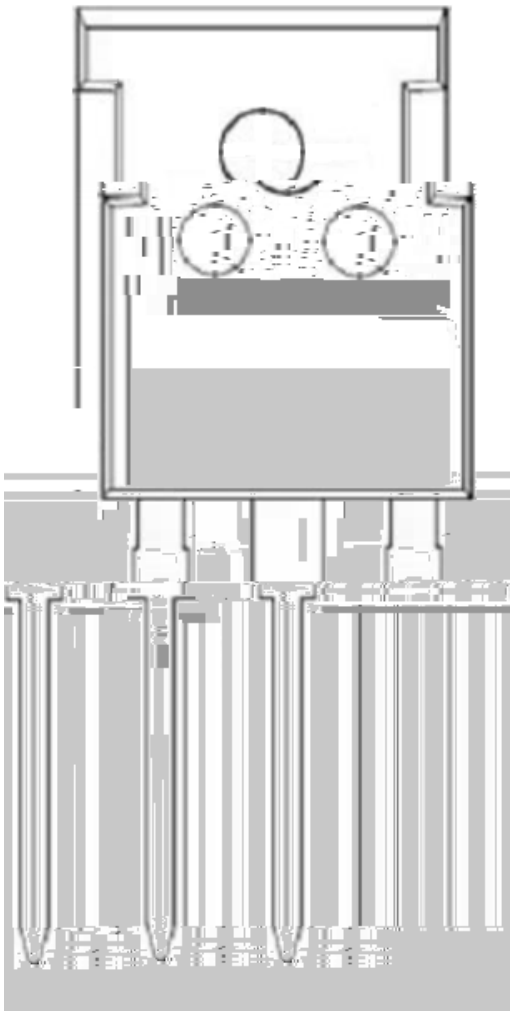
Fig. 20 Diode transient thermal impedance as a function of pulse width ($D=t_p/T$)

/ Package Dimensions



Symbol	Dimensions In Millimeters			Symbol	Dimensions In Millimeters		
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.
A	4.90	5.00	5.10	E	15.70	15.80	15.90
A1	2.31	2.41	2.51	E1	13.10	13.30	13.50
A2	1.90	2.00	2.10	E2	4.40	4.50	4.60
a	0.00	-	0.15	E3	1.50	1.60	1.70
a'	0.00	-	0.15	e	5.436 BSC		
b	1.16	-	1.26	L	19.80	19.92	20.10
b1	1.15	1.20	1.22	L1	-	-	4.30
b2	1.96	-	2.06	M	0.35	-	0.95
b3	1.95	2.00	2.02	P	3.40	3.50	3.60
b4	2.96	-	3.06	P1	7.00	-	7.40
b5	2.96	3.00	3.02	P2	2.40	2.50	2.60
b6	-	-	2.25	Q	5.60	-	6.00
b7	-	-	3.25	S	6.05	6.15	6.25
c	0.59	-	0.66	T	9.80	-	10.20
c1	0.58	0.60	0.62	U	6.00	-	6.40
D	20.90	21.00	21.10				
D1	16.25	16.55	16.85				
D2	1.05	1.17	1.35				

/ Marking Instructions



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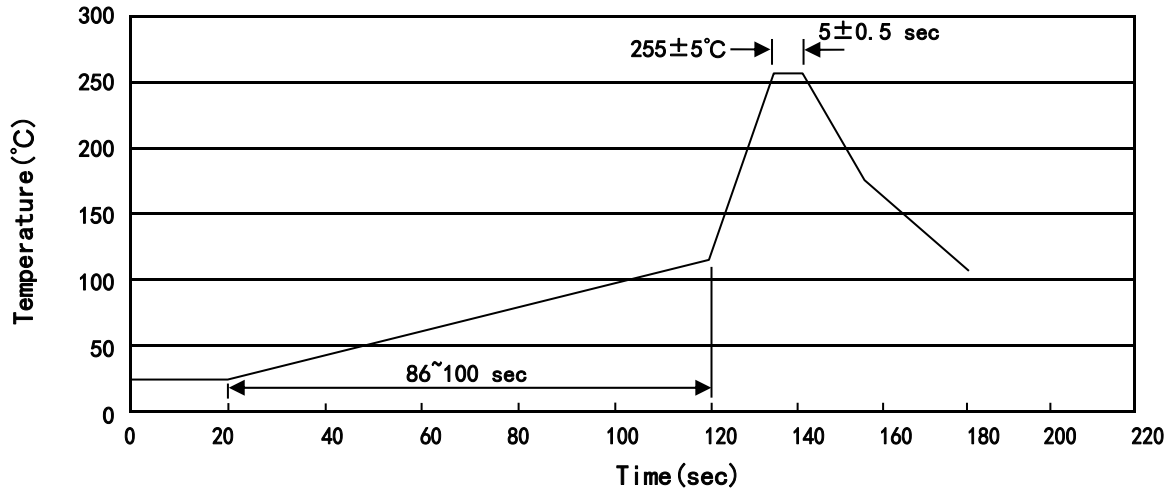
( ) / Temperature Profile for Dip Soldering(Pb-Free)



± ± ± ±

/ Resistance to Soldering Heat Test Conditions

± ±

/ Packaging SPEC.

	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

/ Notices