@ *f* Parameter		… Z Symbol	*f* › Rating	% y Unit
Collector-Emitter Voltage		V_{CES}	650	V
Gate-Emitter Voltage		V_{GES}	f 30	V
Continuous Collector Current	T_C=25	I_C	80	A
	T_C=100		40	A
Pulsed Collector Current , Limited by T_{Jmax}		I_{CM}	160	A
Continuous Diode Forward Current	T_C=25	I_F	80	A
	T_C=100		40	A
Diode Repetitive Peak Forward Current		I_{FRM}	160	A
Short circuit withstand time		t_{sc}	9	us
Power Dissipation	T_C=25	P_D	395	W
Storage Temperature Range		T_{STG}	-55 to +175	
Maximum Temperature for Soldering		T_L	260	
Maximum Junction-to-Ambient		R $_{JA}$	40	/W

Maximum IGBT Junction-to-Case/W 35-8.4(R)]TJ /TT3 1 Tf 7.0172 0 0 7.02 338376 437.4803 Tm 0 Tc 0 Tw <021

CEC I

@ *f* Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions		Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Turn-On Delay Time	$t_{d(on)}$		T_C=25		32		ns
			T_C=175		30		

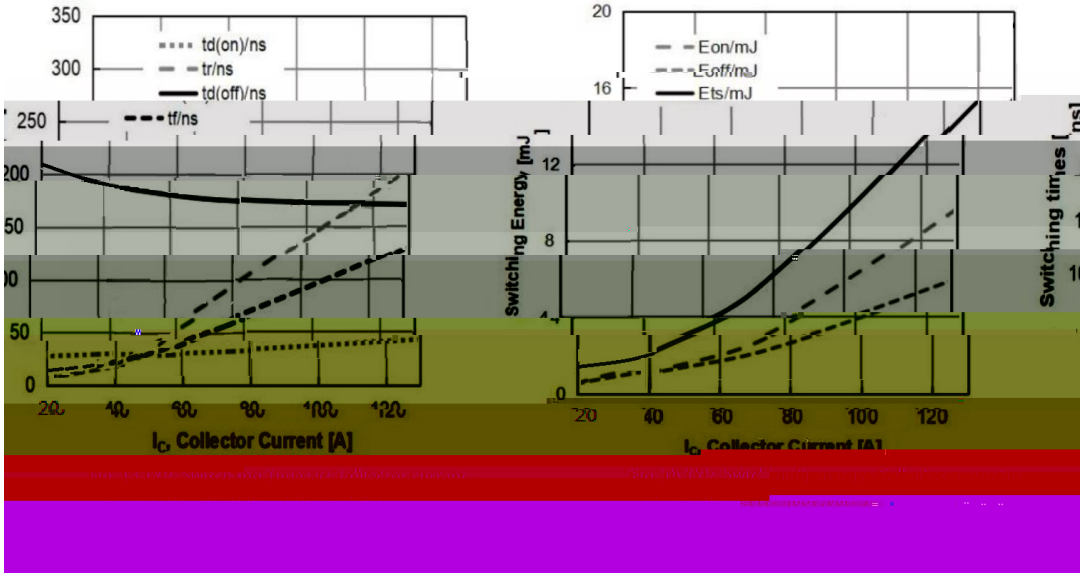
Turn-On Rise Time t

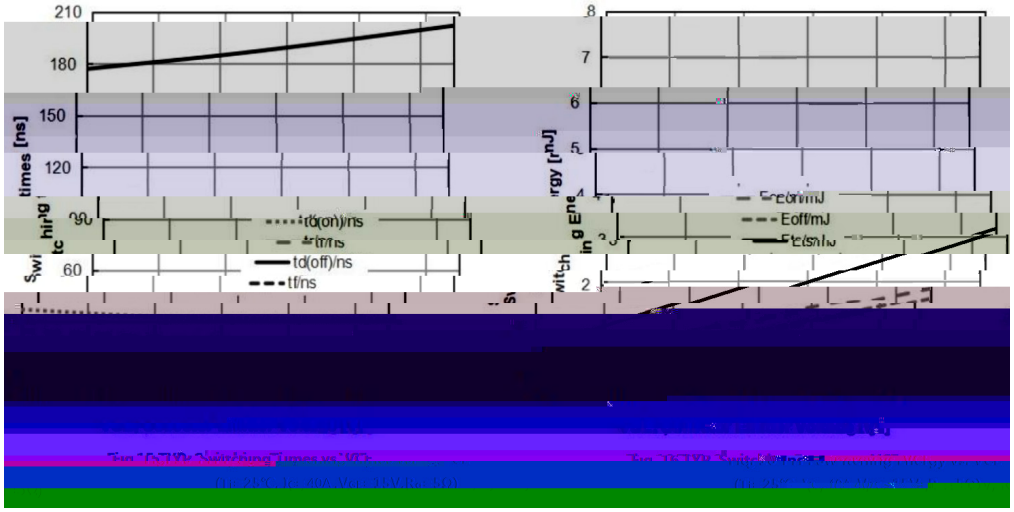
V_{GE}=15V,
V_{CE}=400V
I_C=40A,
R_G=5
Inductive
Load

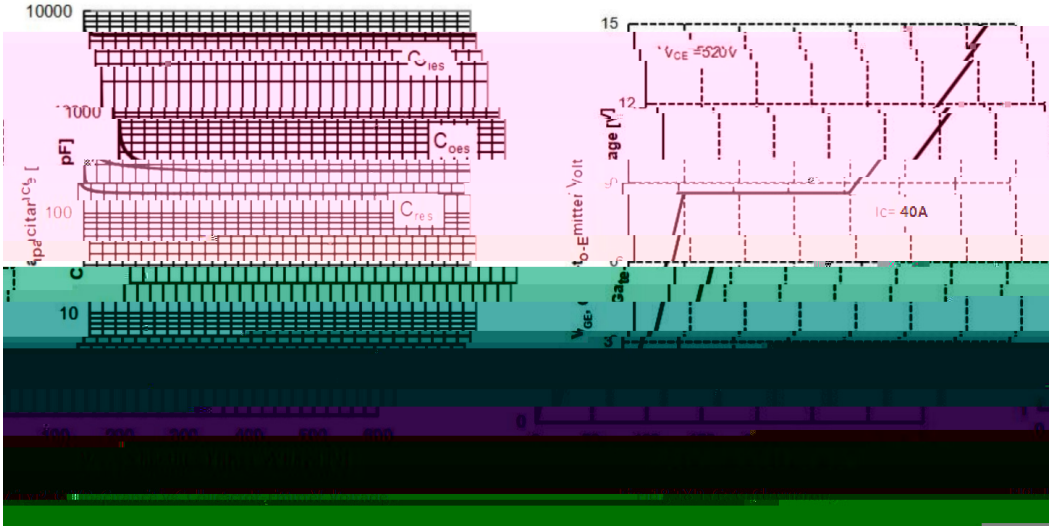
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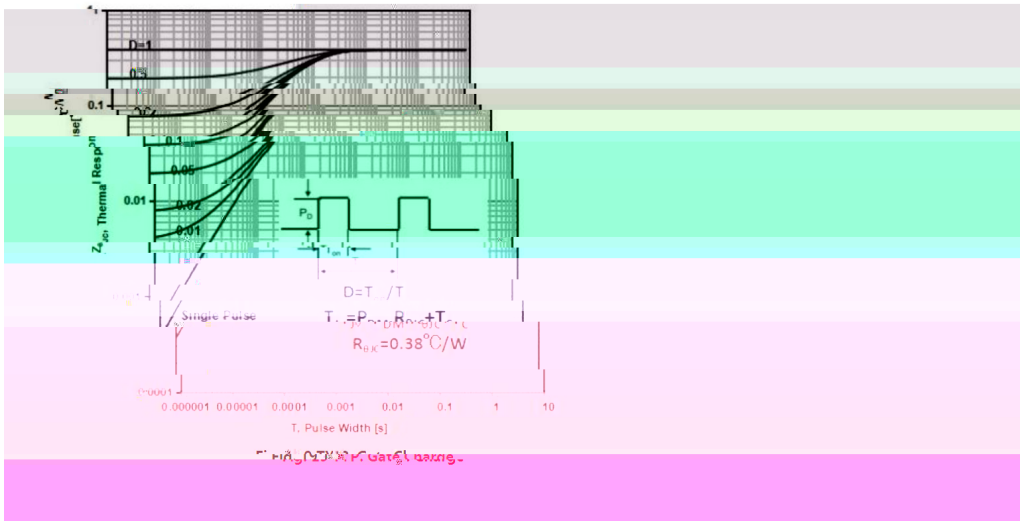
Ô ? d • Ž ¢ / Electrical Characteristic Curve



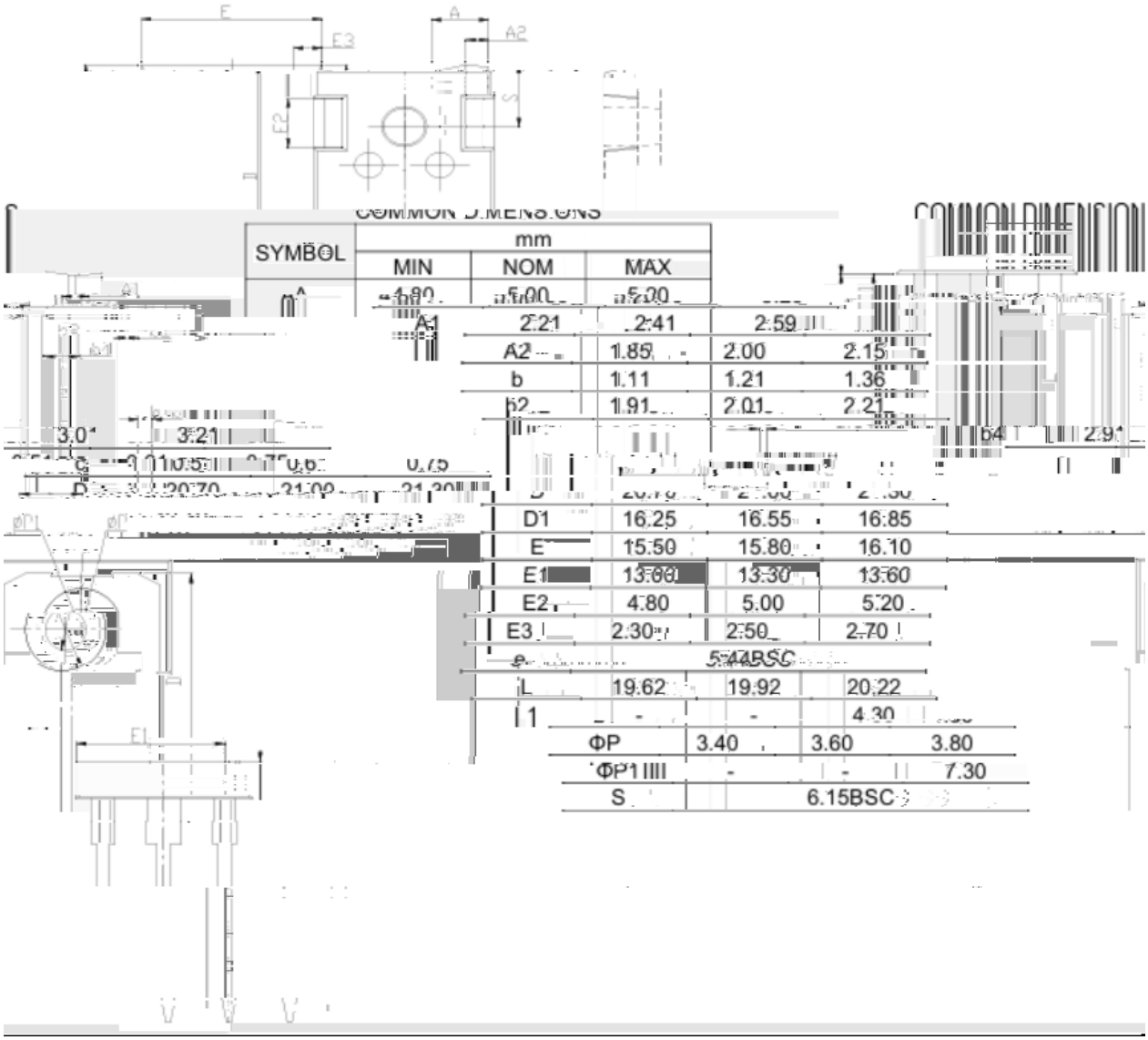




Ô ? d • Ž ¢ / Electrical Characteristic Curve



Ø ¤ =) ¢ / Package Dimensions



SYMBOL	mm		
	MIN	NOM	MAX
A	4.80	5.00	5.20
A1	2.21	2.41	2.59
A2	1.85	2.00	2.15
b	1.11	1.21	1.36
b2	1.91	2.01	2.21
D	20.70	21.00	21.30
D1	16.25	16.55	16.85
E	15.50	15.80	16.10
E1	13.00	13.30	13.60
E2	4.80	5.00	5.20
E3	2.30	2.50	2.70
e		5.44BSC	
L	19.62	19.92	20.22
L1	-	-	4.30
ΦP	3.40	3.60	3.80
ΦP1	-	-	7.30
S		6.15BSC	

, M y ƒ / Marking Instructions



ª ¢ y

BR y ¸ [W A

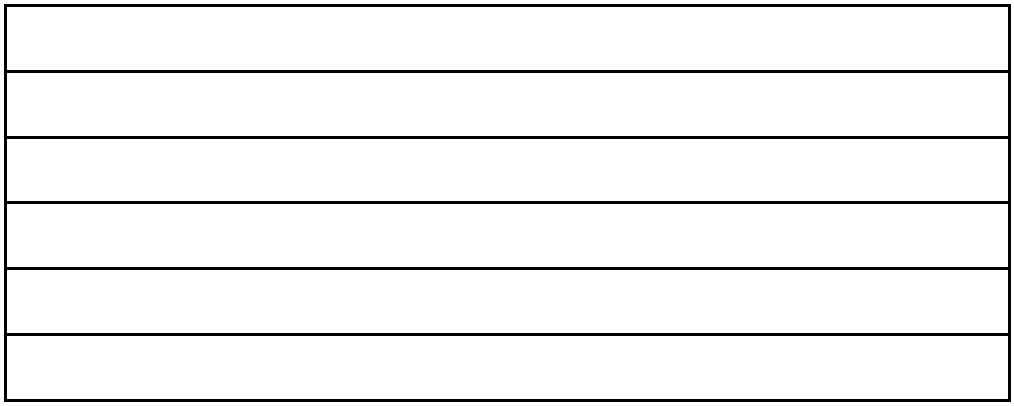
- (4 ' . ' y º Z W A

y ÿ D Z W A k š ÿ D Z J

Note:

BR:	Company Code
GB40N65AHA:	Product Type Code
****:	Lot No. Code, code change with Lot No.

G PD t … • Ž ¢ (x /) / Temperature Profile for Dip Soldering(Pb-Free)



ª ¢ y

1o• Ä ½ “ † 25 ½150 - k ž • 60 ½90sec;

2o• Q › “ † 255 r5 - k ž • 4 Ò 5 r0.5sec;

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

Note:

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

2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 270 r5 - ž • y 10 r1 sec. Temp.:270±5 Time:10±1 sec

G P á / Packaging SPEC.

ì ’ x / TUBE

Package Type 7>û ˜ E	Units ;>û ¦H	Dimension ;>û p . (unit ÆEmm³)