/ Descriptions

TO-220 NPN Silicon NPN transistor in a TO-220 Plastic Package.

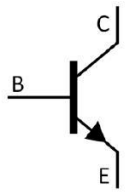
/ Features

High speed switching, high SOA.

/ Applications

High voltage switching and amplifier applications.

/ Equivalent Circuit



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PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

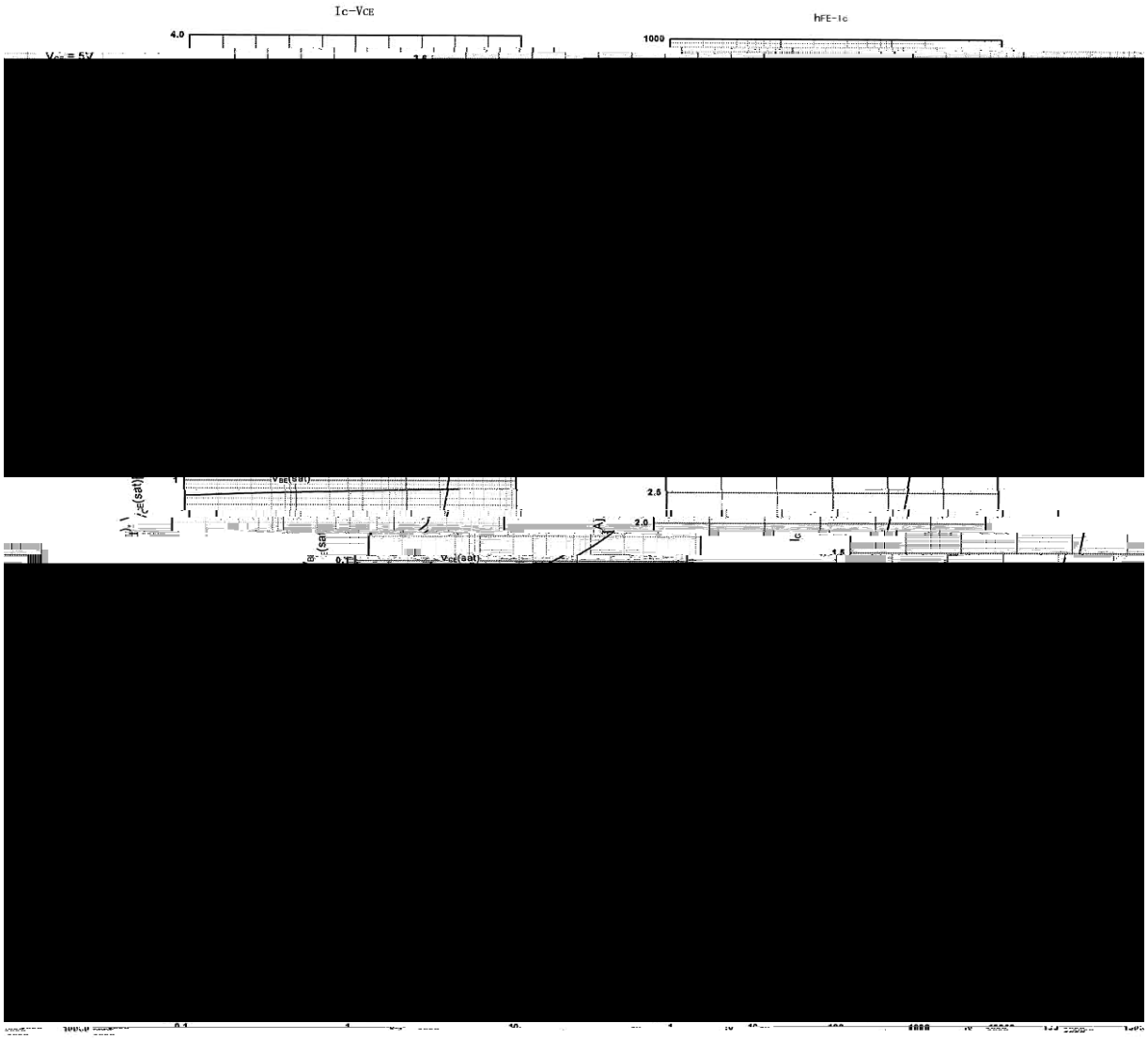
/ Absolute Maximum Ratings(Ta=25)

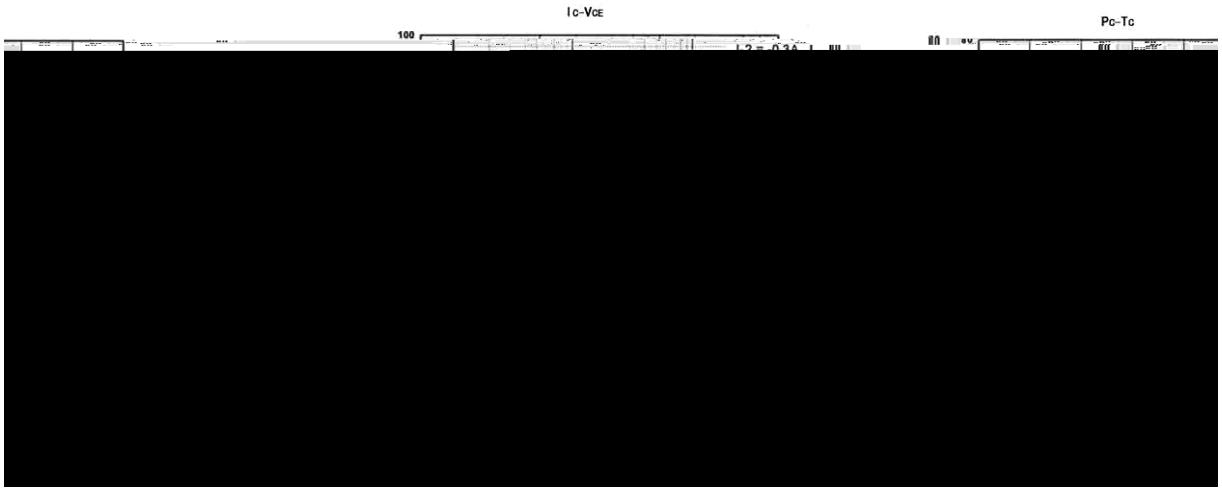
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	1100	V
Collector to Emitter Voltage	V_{CEO}	800	V
Emitter to Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous	I_C	3.0	A
Collector Current – Continuous(Pulse)	I_{CP}	10	A
Base Current - Continuous	I_B	1.5	A
Collector Power Dissipation	P_C(Tc=25)	50	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

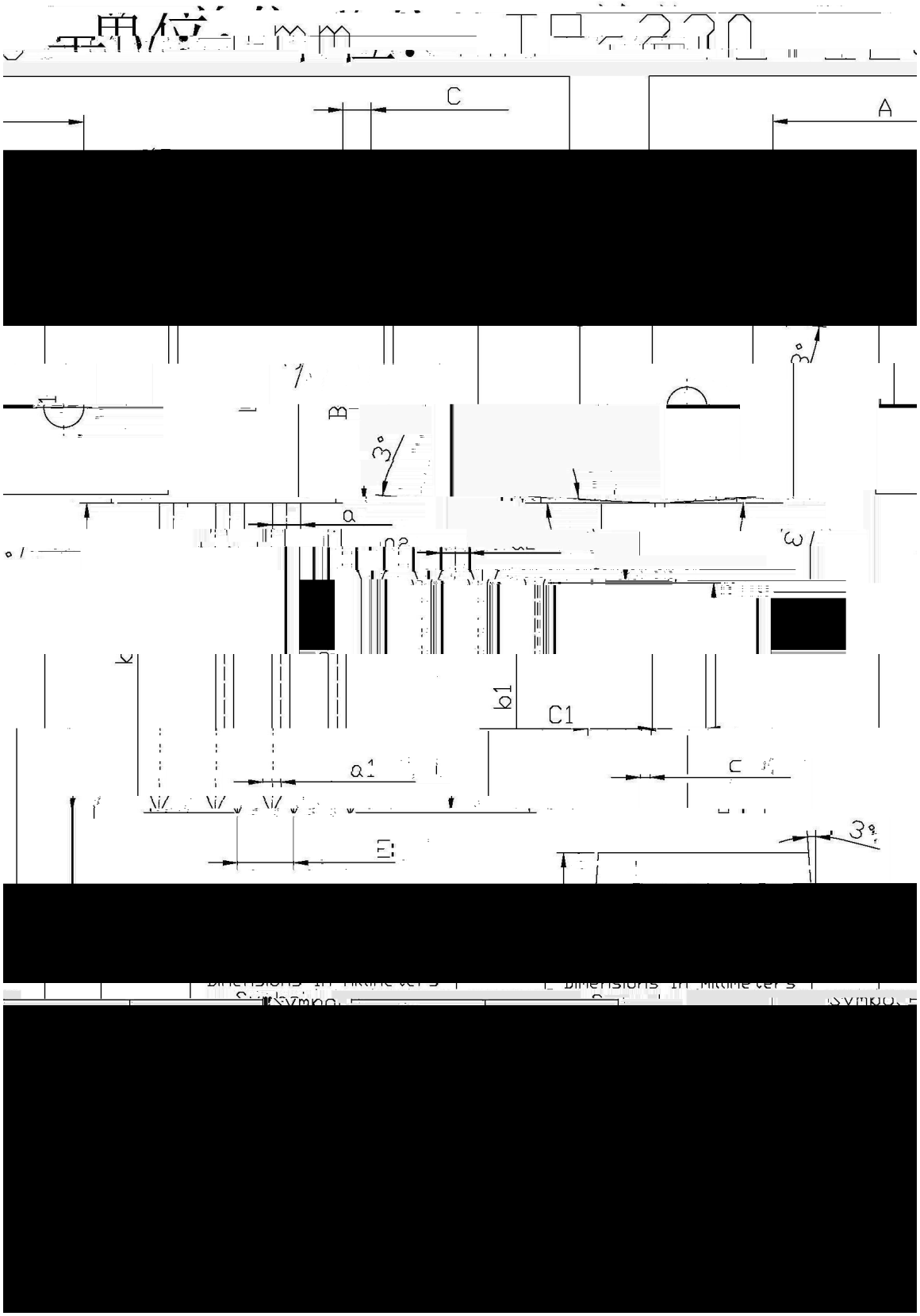
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=1.0mA I_E=0	1100			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=5.0mA I_B=0	800			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=1.0mA I_C=0	7.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=800V I_E=0			10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0			10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V I_C=0.2A	10		40	
	$h_{FE(2)}$	V_{CE}=5.0V I_C=1.0A	8.0			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1.5A I_B=0.3A			2.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=1.5A I_B=0.3A			1.5	V
Transition Frequency	f_T	V_{CE}=10V I_C=0.2A		15		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		60		pF
Turn-On Time	T_{on}	V_{CC}=400V R_L=200Ω I_C=5I_{B1}=-2.5I_{B2}=2A			0.5	μs
Storage Time	T_{stg}				3.0	
Fall Time	T_{off}				0.3	

/ Electrical Characteristic Curve

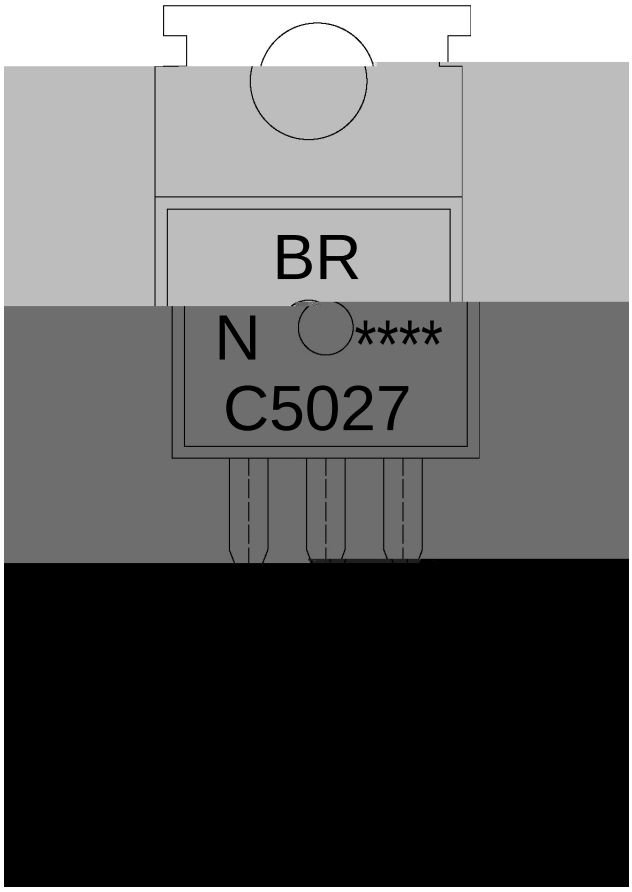




/ Package Dimensions



/ Marking Instructions



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N: h_{FE}

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Note:

BR:	Company Code
C5027:	Product Type.
N:	h_{FE} Classifications Symbol
****:	Lot No. Code, code change with Lot No.