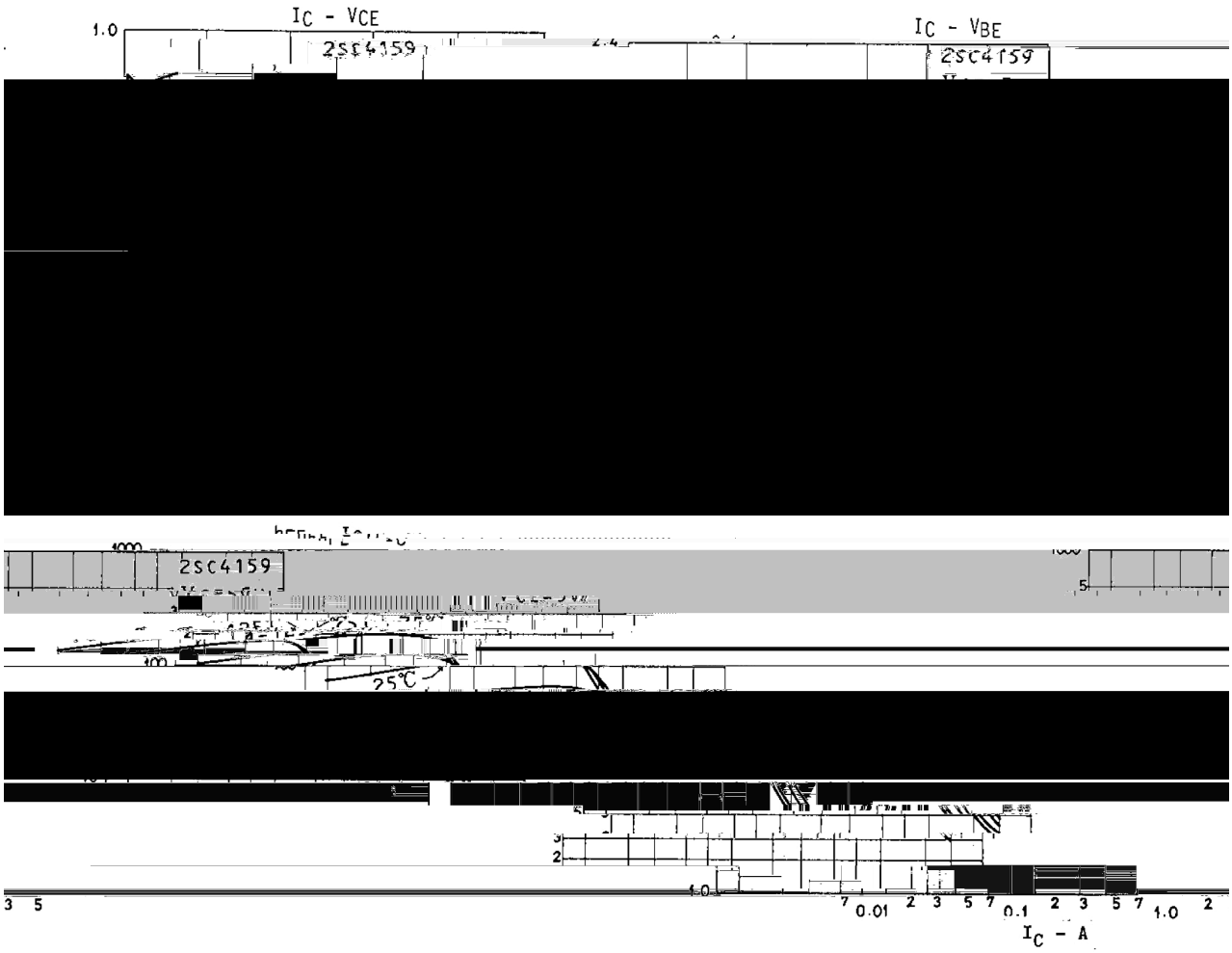
TO-220F	NPN	Silicon NPN transistor in a TO-220F Plastic Package.

High voltage.

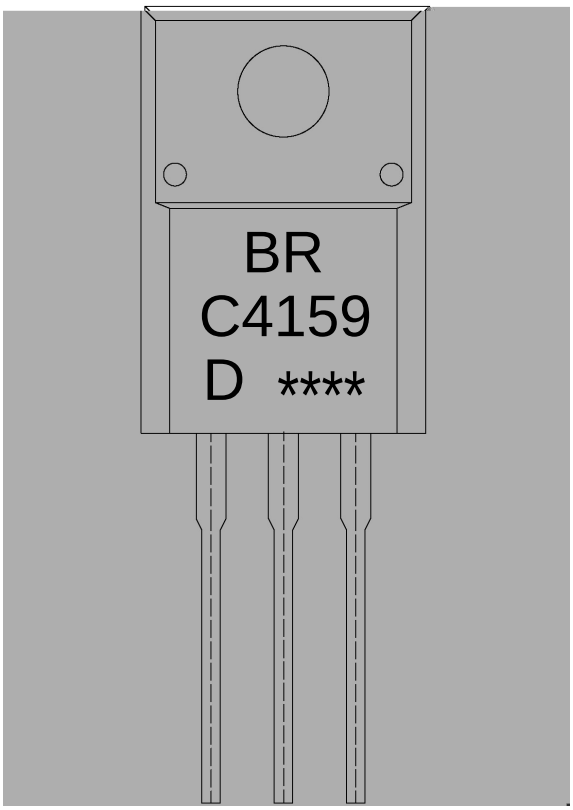
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	160	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	1.5	A
Collector Current – Continuous(Pulse)	I_{cp}	3.0	A
Collector Power Dissipation	P_C(Tc=25)	15	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=1.0mA I_E=0	180			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA R_{BE}=∞	160			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=1.0mA I_C=0	6.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=120V I_E=0			10	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			10	μA
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=300mA	60		200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA I_B=50mA		0.3		V
Base to Emitter Voltage	V_{BE}	V_{CE}=5.0V I_C=10mA			1.5	V
Transition Frequency	f_T	V_{CE}=10V I_C=50mA		100		MHz

/ Electrical Characteristic Curve



/ Marking Instructions



BR

C4159

D: h_{FE}

****

Note:

BR:	Company Code.
C4159:	Product Type.
D:	h_{FE} Classifications Symbol
****:	Lot No. Code, code change with Lot No.