/ Descriptions

SOT-89 PNP

Silicon PNP transistor in a SOT-89 Plastic Package.

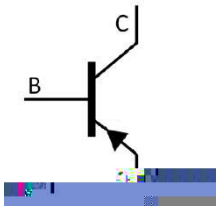
BR2SD2010TAQ AEC-Q101

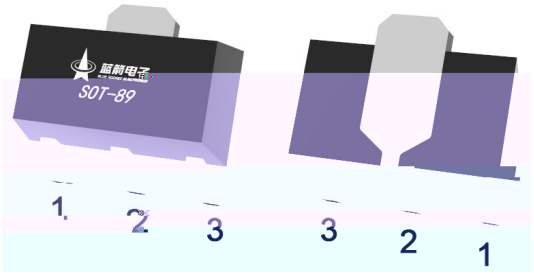
Complementary pair with BR2SD2010TAQ, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

MOSFETs IGBTs

Emergency Lighting Circuits,Motor Driving (Including DC Fans),Backlight Inverters,Power Switches,Gate Driving MOSFETs and IGBTs, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit





PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

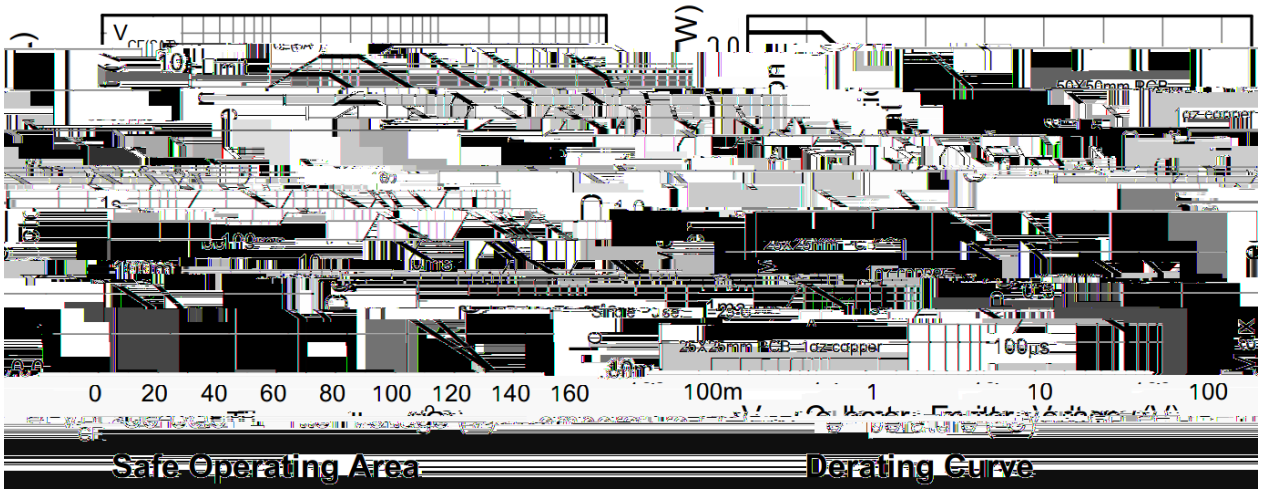
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-60	V
Emitter to Base Voltage	V_{EBO}	-7	V
Collector Current	I_C	-4.3	A
Base Current	I_B	-2	A
Peak Collector Current	I_{CM}	-15	A
Collector Dissipation	P_C	1.5	W
Junction Temperature	T_j	150	
Storage Temperature	T_{stg}	-65 150	
Junction to Ambient	θ_{JA}	83	/W
Junction to Case	θ_{JC}	60	/W

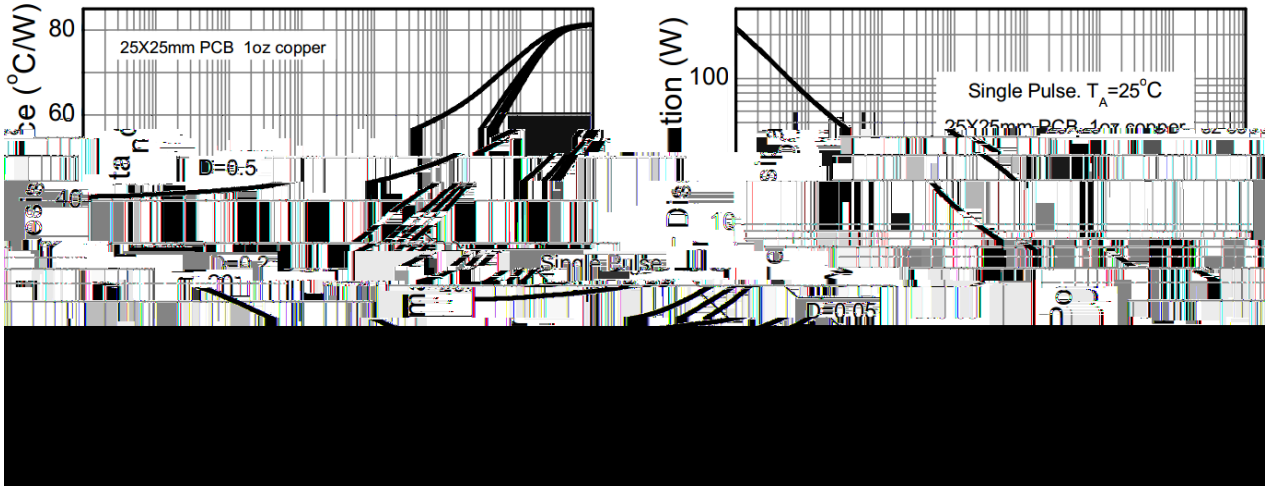
Notes:
1.Absolute maximum ratings are those values beyond which the device could be permanently damaged.Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2.Single pulse, PW=10ms.
3.Device mounted on FR-4 PCB with minimum recommended pad layout. (25×25×1.6mm)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V_{CBO}	I_C=-100μA I_E=0	-100			V
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=-10mA I_B=0	-60			V
Emitter-Base Breakdown Voltage	V_{EBO}	I_E=-100μA I_C=0	-7.0			V

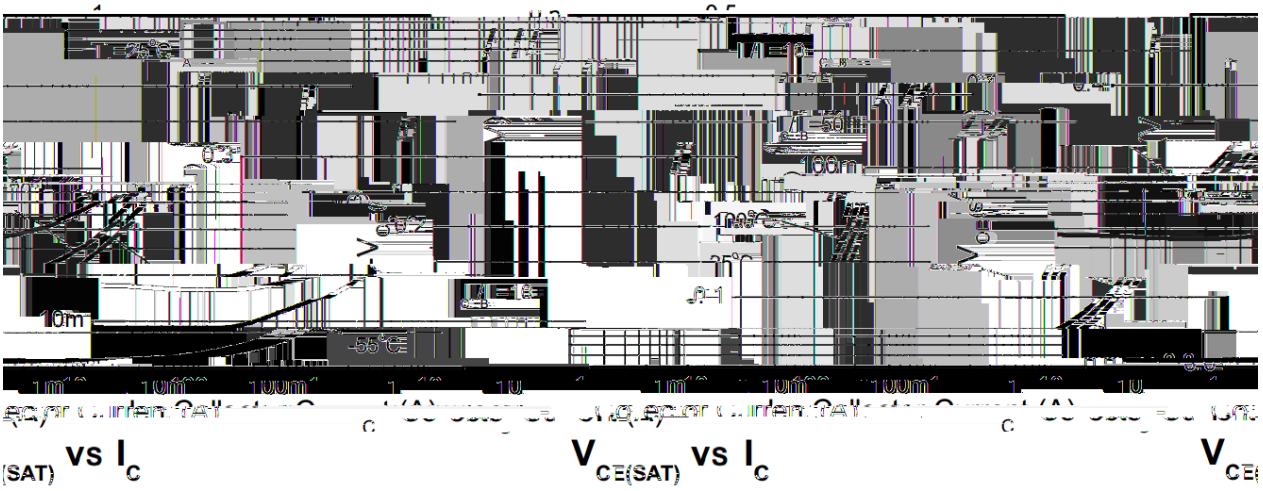
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Current Transfer Ratio (Note)	h					

/ Thermal Characteristics and Derating Information

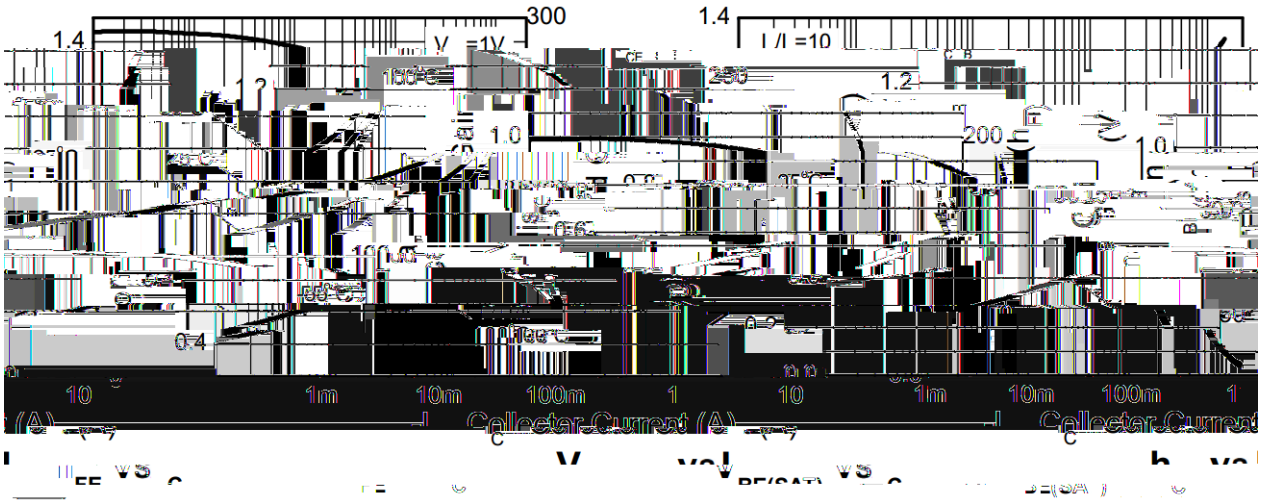


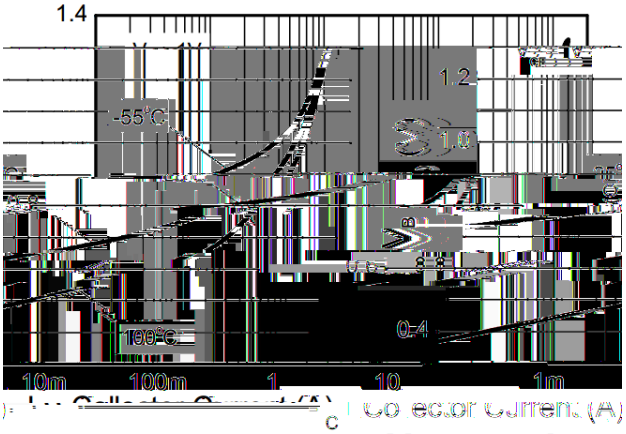


/ Electrical Characteristic Curve



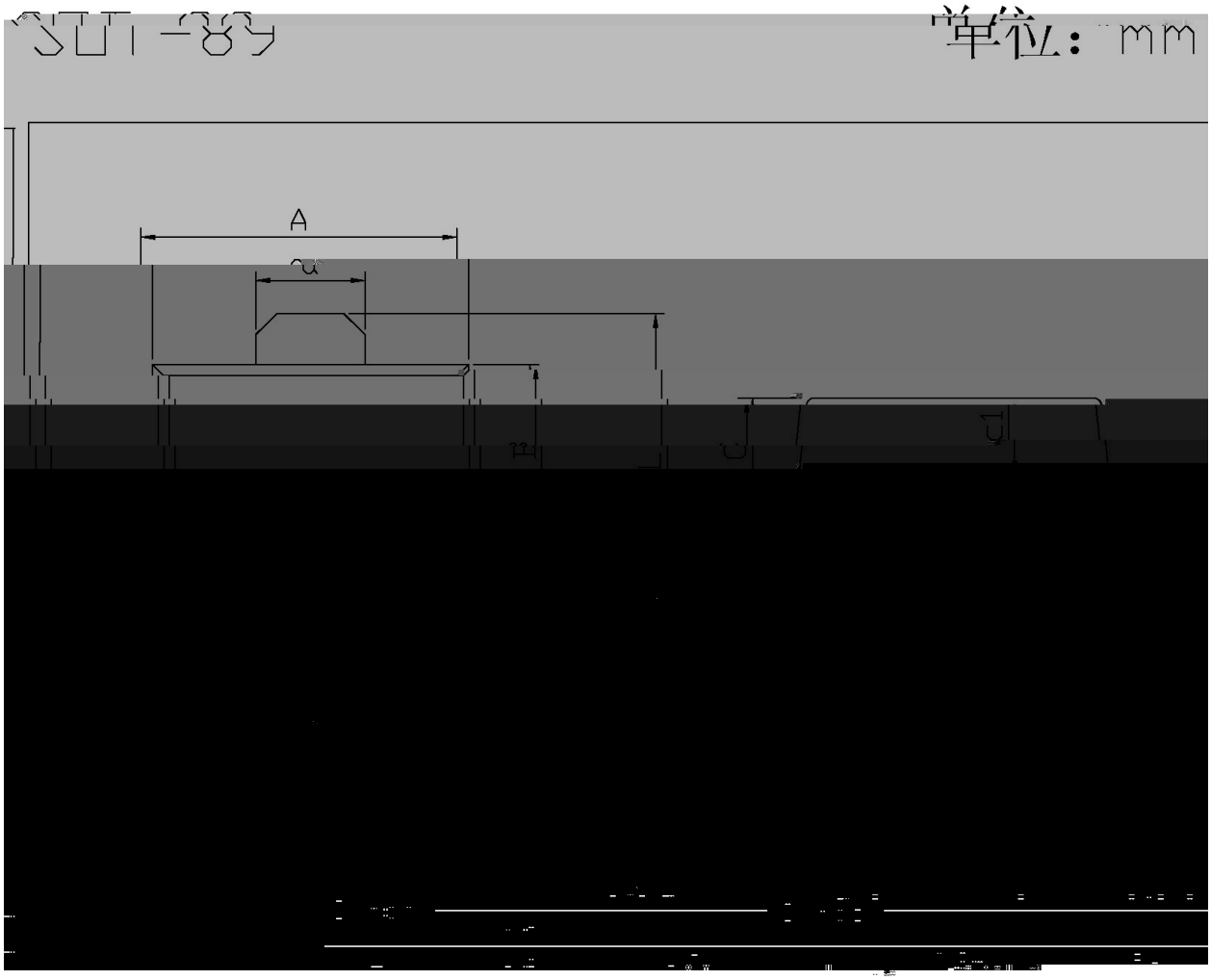
$V_{CE(SAT)}$ vs I_C



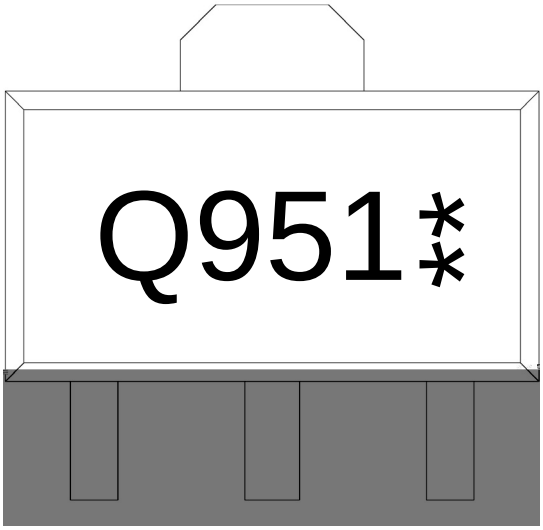


$V_{BE(ON)}$ vs I_C

/ Package Dimensions



/ Marking Instructions



Q

951

**

Note:

Q:	Automobile halogen-free product Code
951:	Product Type
**:	Lot No. Code, code change with Lot No

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1	150 200	60 120sec;	1.Preheating:150~200 , Time:60~120sec.
2	255±5	5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3	2 10 /sec.		3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units	Dimension	(unit mm^3)