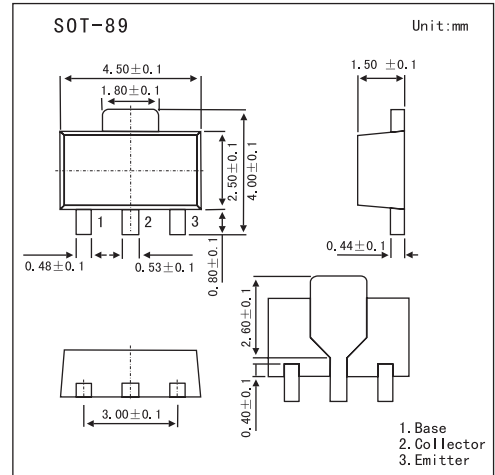


■ Features

- 2W power dissipation.
- 10A peak pulse current.
- Excellent HFE characteristics up to 10 Amps.
- Extremely low saturation voltage E.g. 21mv Typ.
- Extremely low equivalent on-resistance.

$R_{CE(sat)}$  78mΩ at 4.5A.



■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	150	V
Collector-emitter voltage	$V_{CE0}$	75	V
Emitter-base voltage	$V_{EB0}$	5	V
Continuous collector current	$I_{CM}$	10	A
Peak pulse current	$I_C$	3	A
Power dissipation	$P_{tot}$	1	W
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA	150			V
Collector-emitter breakdown voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA	75			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA	5			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =120V		0.9	10	nA
Collector Emitter Cut-Off Current	I <sub>CES</sub>	V <sub>CE</sub> =120V		1.5	10	nA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V		0.3	10	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =0.2A, I <sub>B</sub> =20mA I <sub>C</sub> =0.5A, I <sub>B</sub> =20mA I <sub>C</sub> =1A, I <sub>B</sub> =10mA I <sub>C</sub> =2A, I <sub>B</sub> =100mA I <sub>C</sub> =4.5A, I <sub>B</sub> =200mA		21 55 150 160 350	30 75 200 210 440	mV
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =100mA		900	1000	mV
Base-emitter ON voltage *	V <sub>BE(on)</sub>	I <sub>C</sub> =3A, V <sub>CE</sub> =2V		825	950	mV
Static Forward Current Transfer Ratio *	h <sub>FE</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =2V I <sub>C</sub> =0.5A, V <sub>CE</sub> =2V I <sub>C</sub> =1A, V <sub>CE</sub> =2V I <sub>C</sub> =4.5A, V <sub>CE</sub> =2V I <sub>C</sub> =10A, V <sub>CE</sub> =2V	270 300 300 40 -	440 450 450 60 20	1200 - -	
Transitional frequency	f <sub>T</sub>	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V f=100MHz		140		MHz
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=1MHz		21	30	pF
Turn-on time	t <sub>(on)</sub>	I <sub>C</sub> =2A, V <sub>CC</sub> =50V		162		ns
Turn-off time	t <sub>(off)</sub>	I <sub>B1</sub> =I <sub>B2</sub> =20mA		900		ns

\* Pulse test: tp = 300 μs; d ≤ 0.02.

■ Marking

Marking	053
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