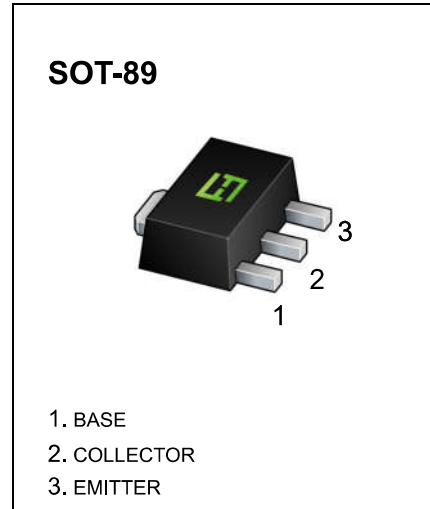


**FEATURE**

- High voltage
- Large continuous collector current capability

MARKING: 1013



**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted )**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-160	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-160	V
V <sub>EBO</sub>	Emitter-Base Voltage	-6	V
I <sub>C</sub>	Collector Current -Continuous	-1	A
P <sub>C</sub>	Collector Power Dissipation	0.5	W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	250	°C/W

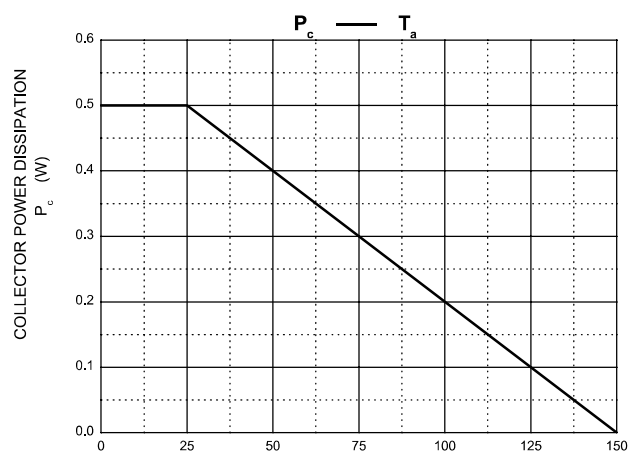
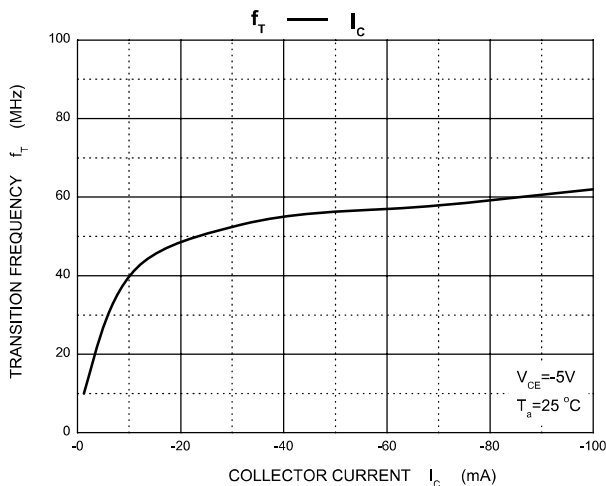
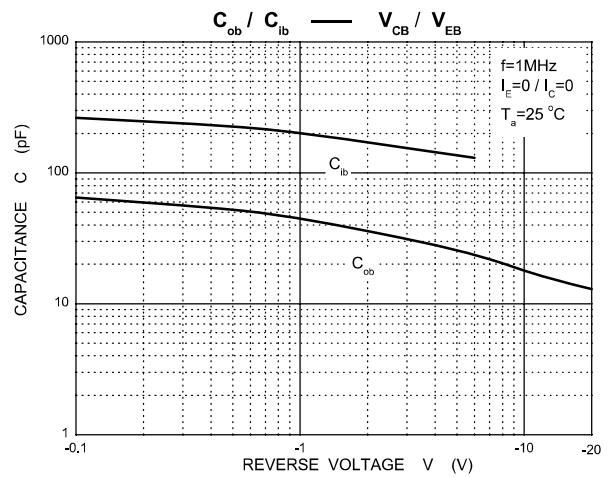
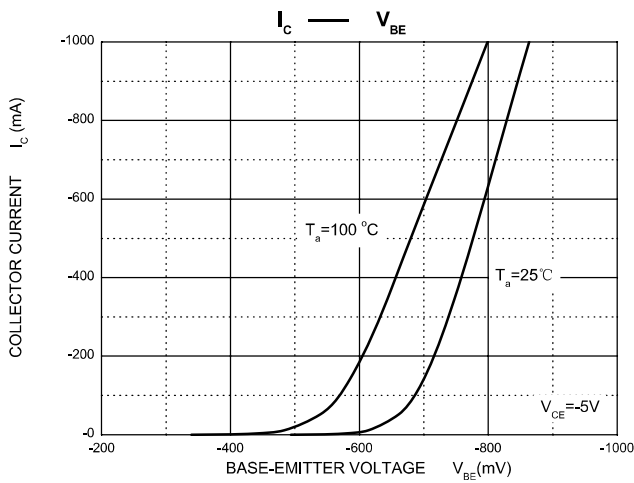
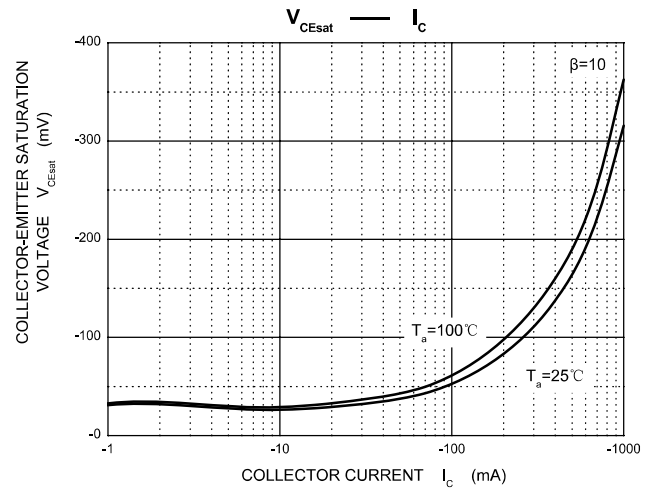
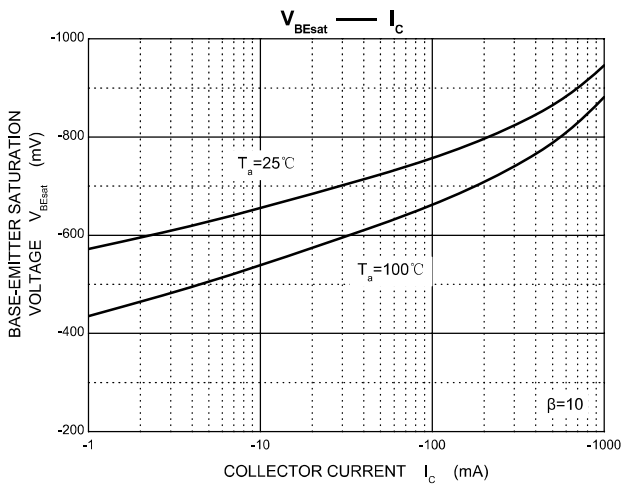
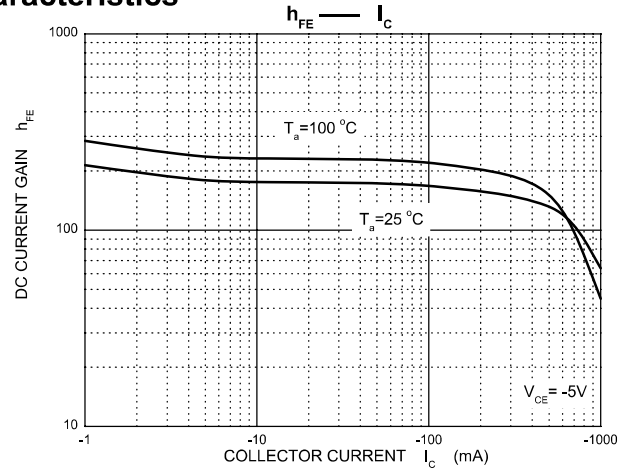
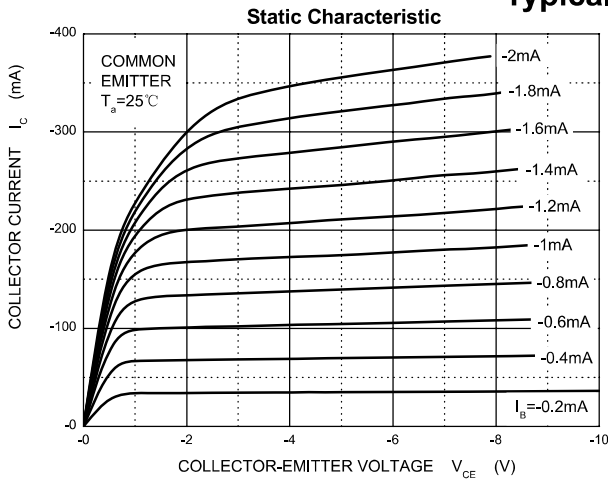
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =- 100μA , I <sub>E</sub> =0	-160		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA , I <sub>B</sub> =0	-160		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA , I <sub>C</sub> =0	-6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-150 V , I <sub>E</sub> =0		-1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-6V, I <sub>C</sub> =0		-1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-5 V , I <sub>C</sub> =- 200mA	60	320	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -500m A , I <sub>B</sub> = -50mA		-1.5	V
Base-emitter voltage	V <sub>BE</sub>	I <sub>C</sub> = -5 mA , V <sub>CE</sub> =- 5V		-0.75	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -5 V , I <sub>C</sub> = -200mA	15		MHz

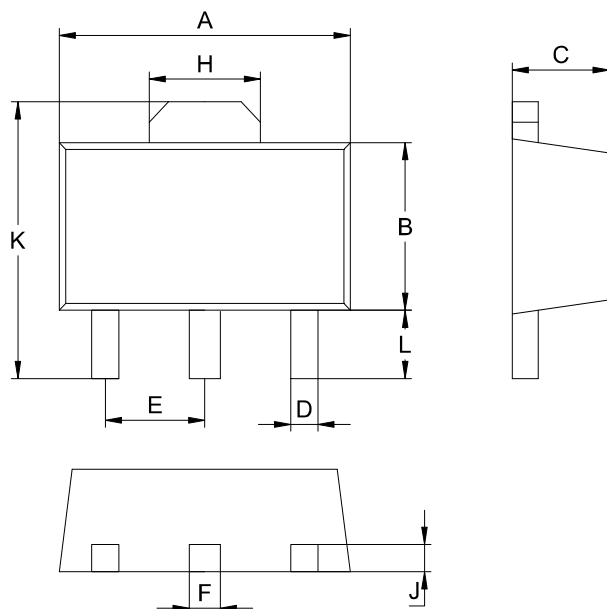
**CLASSIFICATION OF h<sub>FE</sub>**

Rank	R	O	Y
Range	60-120	100-200	160-320

Typical Characteristics

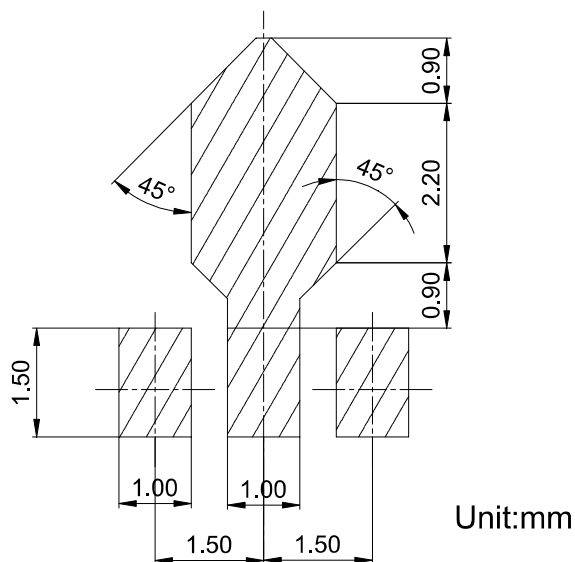


**SOT-89 Package Outline Dimensions**



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.20	2.70
C	1.30	1.70
D	0.30	0.60
E	1.40	1.60
F	0.30	0.60
H	1.40	1.80
J	0.30	0.60
L	0.90	1.10
K	3.75	4.35
All Dimensions in mm		

**SOT-89 Suggested Pad Layout**



Unit:mm

**PACKAGE INFORMATION**

Device	Package	Shipping
78L05	SOT-89	1000/Tape&Reel