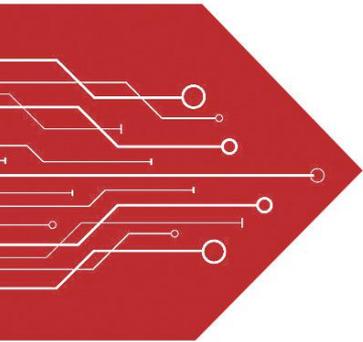


# MSKSEMI

SEMICONDUCTOR



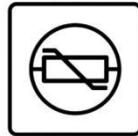
ESD



TVS



TSS



MOV



GDT

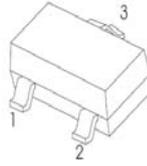


PLED

Product data sheet



SOT - 23



1. BASE
2. EMITTER
3. COLLECTOR

TRANSISTOR (PNP)

**FEATURE**

- Collector-Base Voltage
- Complement to C945-MS

MARKING :CS

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

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	-60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-50	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-150	mA
P <sub>C</sub>	Collector Power Dissipation	200	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

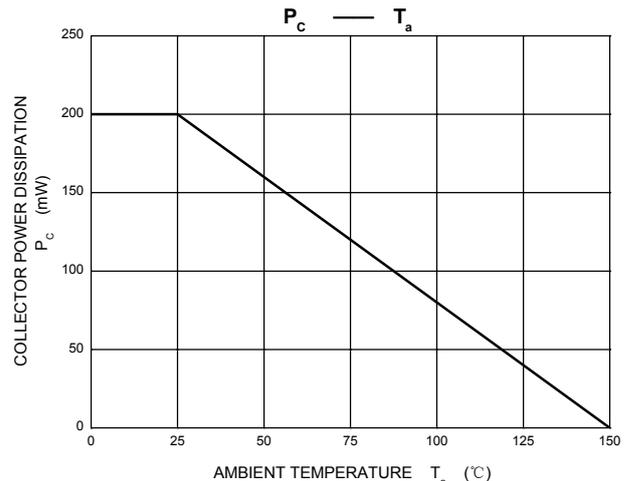
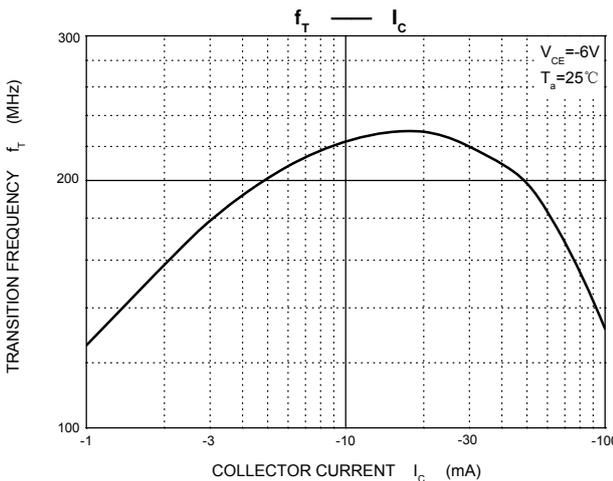
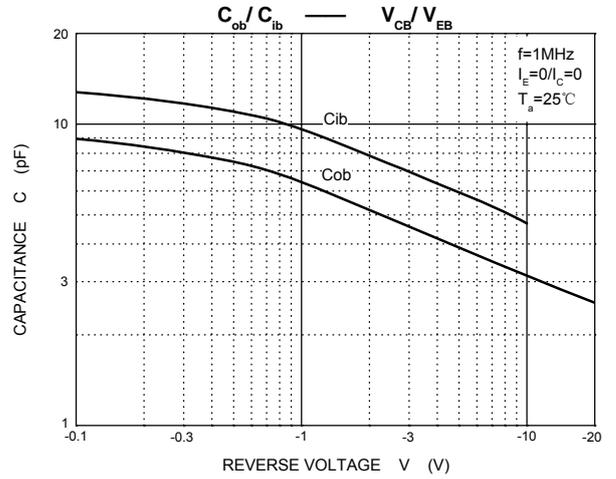
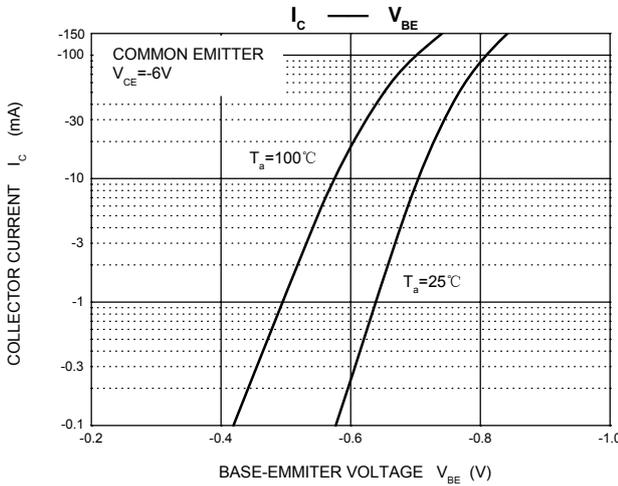
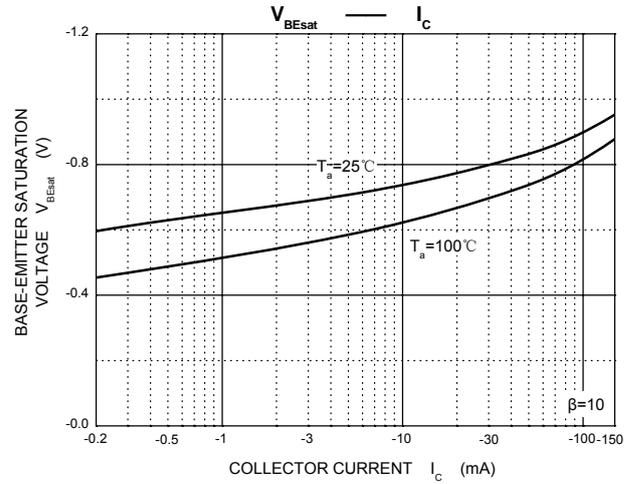
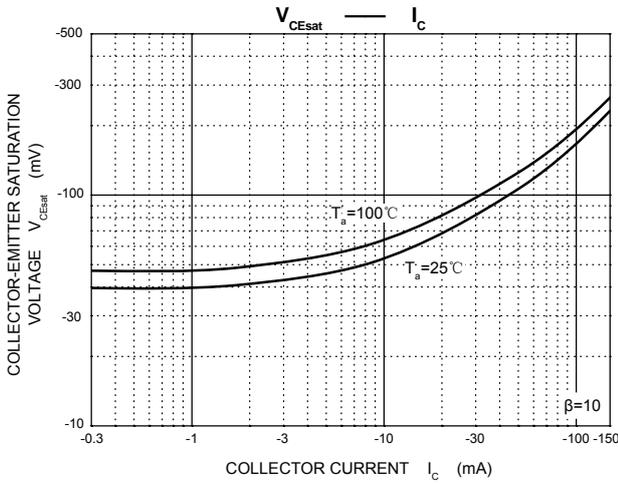
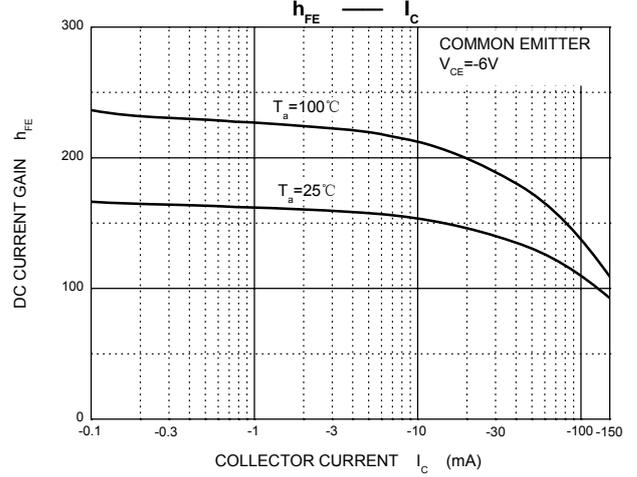
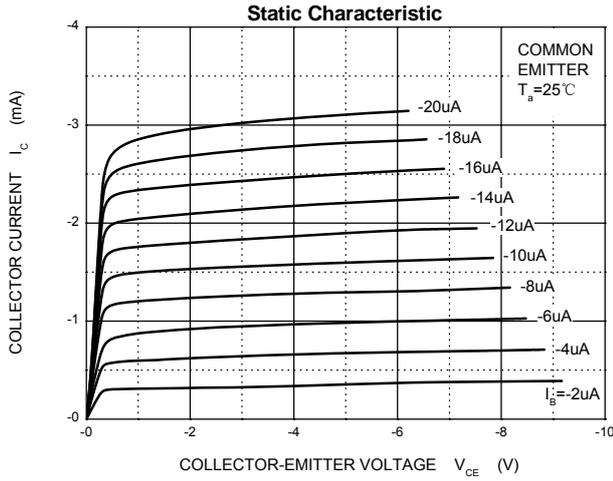
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CB0</sub>	I <sub>C</sub> = -5uA, I <sub>E</sub> =0	-60			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, I <sub>B</sub> =0	-50			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -50uA, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -60 V, I <sub>E</sub> =0			-0.1	uA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5 V, I <sub>C</sub> =0			-0.1	uA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -6 V, I <sub>C</sub> = -1mA	120		475	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -100mA, I <sub>B</sub> =- 10mA		-0.18	-0.3	V
Base-emitter voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> =-6V, I <sub>C</sub> =-1.0mA	-0.58	-0.62	-0.68	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-6V, I <sub>C</sub> =-10mA	50			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		4.5	7	pF
Noise figure	NF	V <sub>CE</sub> =-6V, I <sub>C</sub> =-0.3mA, R <sub>g</sub> =10kΩ, f=100Hz		6	20	dB

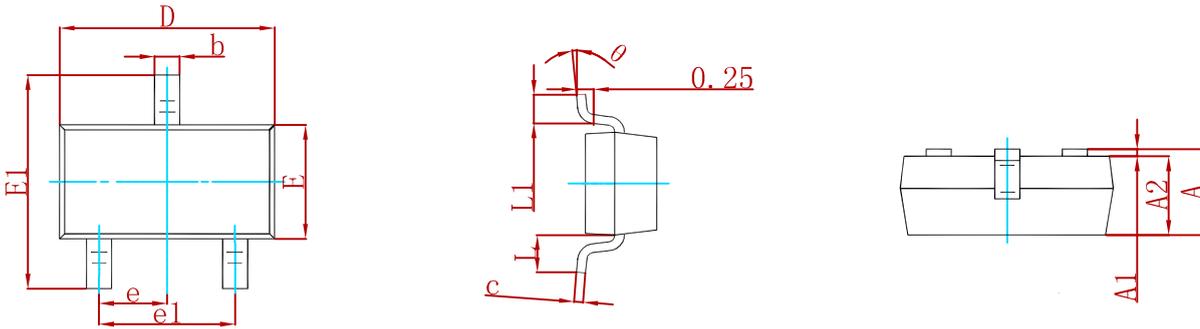
**CLASSIFICATION OF h<sub>FE</sub>**

Rank	L	H
Range	120-200	200-400

# Typical Characteristics

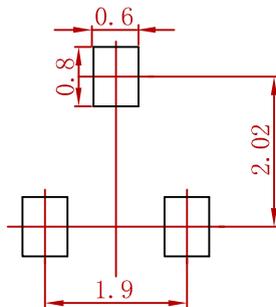


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance: ± 0.05mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
A733-MS	SOT-23	3000

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