

FEATURES

- High hFE
- Low noise
- Complementary to 2SA1504

2SC3875 (NPN)

Maximum Ratings (TA=25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current -Continuous	I _C	0.15	A
Collector Power dissipation	P _C	0.15	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55to +150	°C

ELECTRICAL CHARACTERISTICS (@ Ta=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CBO}	I _C =100μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{CEO}	I _C = 1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{EBO}	I _E = 100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} = 60V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0			0.1	μA
DC current gain	h _{FE}	V _{CE} = 6V, I _C = 2mA	70		700	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B = 10mA		0.1	0.25	V
base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B = 10mA			1	V
Transition frequency	f _T	V _{CE} =10V, I _C = 1mA	80			MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		2.0	3.5	pF
Noise figure	NF	V _{CE} =6V, I _C =0.1mA, R _g =10k , f=1KHz		1.0	10	dB

CLASSIFICATION OF hFE

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	ALO	ALY	ALG	ALL

2SC3875 Typical Characteristics

