



SOT-23 Plastic-Encapsulate Transistors

KTC3875 TRANSISTOR (NPN)

FEATURES

- High hFE
- Low noise
- Complementary to KTA1504



MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	150	mA
P _C	Collector Power Dissipation	150	mW
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)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 =10kΩ, f=1KHz		1.0	10	dB

CLASSIFICATION OF h_{FE}

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