TRANSISTOR (NPN)

Plastic-Encapsulate Transistor

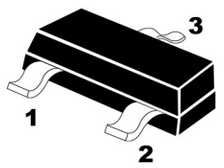
FEATURES

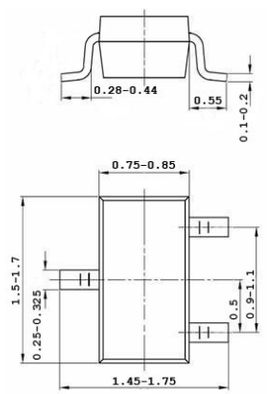
- Low collector saturation voltage:
  $V_{CE(sat)}$ = 0.25V(max.)
- Low output capacitance:
  Cob = 2pF(typ.)
- Complementary pair with 2SA1980E

Marking: CO,CY,CG,CL

SOT-523

1. BASE
2. EMITTER
3. COLLECTOR





UNIT:mm

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

MAXIMUM RATINGS

Parameters	Symbols	Value	UNITS
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	150	mA
Collector Dissipation	P_C	0.15	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55-150	℃

ELECTRICAL CHARACTERISTICS

Parameters	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=10μA, 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	$h_{FE(1)}$	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
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			3.5	pF
Noise Figure	NF	V_{CE}=6V, I_C=0.1mA, f=1KHz, Rg=10KΩ			10	dB

CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y	G	L
Range	70-140	120-240	200-400	300-700

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