

**TRANSISTOR (NPN)**
**Plastic-Encapsulate Transistor**

**FEATURES**

- Power Amplifier

**MARKING:DV1,DV2,DV3,DV4,DV5**

**SOT-23**

1. BASE
2. EMITTER
3. COLLECTOR

UNIT:mm

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**  
 Ratings at 25°C ambient temperature unless otherwise specified.

Parameters	Symbols	Value	UNITS
Collector-Base Voltage	$V_{CBO}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current – Continuous	$I_C$	700	mA
Total Device Dissipation	$P_D$	200	mW
Junction and Storage Temperature	$T_J, T_{stg}$	-55-150	°C

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**ELECTRICAL CHARACTERISTICS**

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE(1)}^*$ $h_{FE(2)}^*$	$V_{CE}=1V, I_C=100mA$ $V_{CE}=1V, I_C=700mA$	110 50		400	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=700mA, I_B=70mA$			0.6	V
Base-Emitter Voltage	$V_{BE(on)}^*$	$V_{CE}=6V, I_C=10mA$	0.6		0.7	V
Transition Frequency	$f_T$	$V_{CE}=6V, I_C=10mA$	170			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=6V, I_E=0, f=10MHz$		12		pF

\* Pulse Test: pulse width  $\leq 350\mu s$ , duty cycle  $\leq 2\%$ .

**CLASSIFICATION OF  $h_{FE(1)}$**

Marking	DV1	DV2	DV3	DV4	DV5
Range	110-180	135-220	170-270	200-320	250-400

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