

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.

MAXIMUM RATINGS

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	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
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