

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

Power dissipation

$$P_{CM} : 0.15W (T_{amb}=25^{\circ}C)$$

Collector current

$$I_{CM} : 0.05A$$

Collector-base Voltage

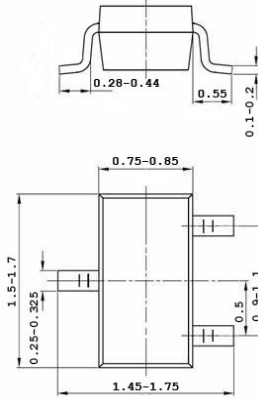
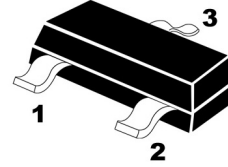
$$V_{(BR)CBO} : 40 V$$

Operating and storage junction temperature range

$$T_J, T_{stg} : -55^{\circ}C \text{ to } +150^{\circ}C$$

**MARKING: AN, AP, AQ**
**SOT-523**

1. BASE
2. EMITTER
3. COLLECTOR



UNIT:mm

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ELECTRICAL CHARACTERISTICS**

Parameters	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	40			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=24V, I_E=0$			0.5	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=3V, I_C=0$			0.5	$\mu A$
DC Current Gain	$H_{FE(1)}$	$V_{CE}=6V, I_C=1mA$	56		270	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.3	V
Transition Frequency	$F_T$	$V_{CE}=6V, I_C=1mA, f=100MHz$	150			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=6V, I_E=0, f=1MHz$			2.2	pF

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

Rank	N	P	Q
Range	56-120	82-180	120-270