



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SMALL FLAT  
PNP Epitaxial Transistor**

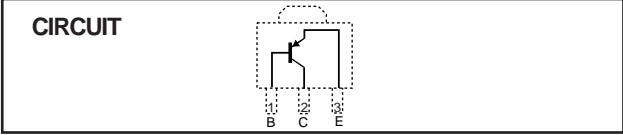
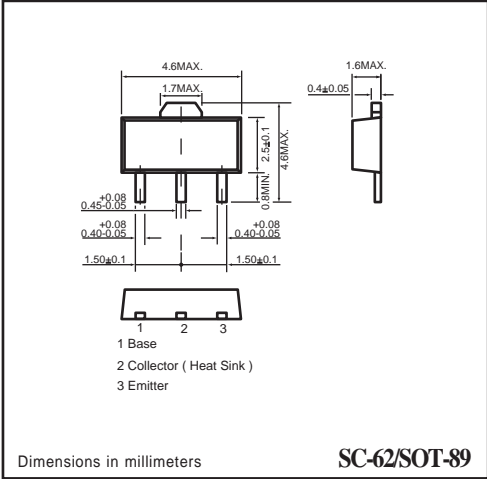
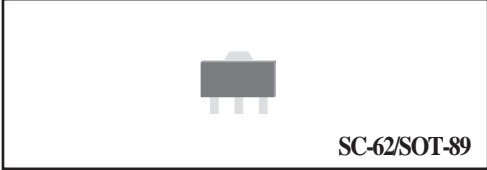
VOLTAGE 20 Volts CURRENT 5 Amperes

**2SB1386GP**

**APPLICATION**  
\* Power driver and Strobe Flash .

**FEATURE**  
\* Small flat package. (SC-62/SOT-89)  
\* Low saturation voltage  $V_{CE(sat)} = -0.35V$  (Typ.) ( $I_C/I_B = -4A/-0.1A$ )  
\*  $PC = 2.0W$  (mounted on ceramic substrate).  
\* High saturation current capability.

**MARKING**  
\* hFE Classification P : P86  
Q : Q86  
R : R86



**MAXIMUM RATINGS** ( At  $T_A = 25^{\circ}C$  unless otherwise noted )

RATINGS	CONDITION	SYMBOL	2SB1386GP	UNITS
Collector - Base Voltage	Open Emitter	$V_{CB0}$	-30	Volts
Collector - Emitter Voltage	Open Base	$V_{CE0}$	-20	Volts
Emitter - Base Voltage	Open Collector	$V_{EB0}$	-6	Volts
Collector Current DC		$I_C$	-5	Amps
Peak Collector Current		$I_{CM}$	-10	Amps
Total Power Dissipation	$T_A \leq 25^{\circ}C$ ; Note 1	$P_{TOT}$	2.0	W
Storage Temperature		$T_{STG}$	-55 to +150	$^{\circ}C$
Junction Temperature		$T_J$	+150	$^{\circ}C$
Operating Ambient Temperature		$T_{AMB}$	-55 to +150	$^{\circ}C$

**Note**

1. Transistor mounted on ceramic substrate by 40mmX40mmX0.7mm.

## RATING CHARACTERISTIC CURVES ( 2SB1386GP )

**CHARACTERISTICS** ( At  $T_A = 25^\circ\text{C}$  unless otherwise noted )

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector-Base breakdown voltage	$I_C = -50\mu\text{A}$	$BV_{CB0}$	-30	-	-	Volts
Collector-Emitter breakdown voltage	$I_C = -1\text{mA}$	$BV_{CEO}$	-20	-	-	Volts
Emitter-Base breakdown voltage	$I_E = -50\mu\text{A}$	$BV_{EBO}$	-6	-	-	Volts
Collector Cut-off Current	$I_E = 0; V_{CB} = -20\text{V}$	$I_{CBO}$	-	-	-0.5	$\mu\text{A}$
Emitter Cut-off Current	$I_C = 0; V_{EB} = -5\text{V}$	$I_{CEO}$	-	-	-0.5	$\mu\text{A}$
DC Current Gain	$V_{CE} = -2\text{V}; \text{Note 1}$ $I_C = -0.5\text{A}$	$h_{FE}$	82	-	390	
Collector-Emitter Saturation Voltage	$I_C = -4\text{A}; I_B = -0.1\text{A}$	$V_{CEsat}$	-	-0.35	-1.0	Volts
Output Capacitance	$I_E = I_C = 0; V_{CB} = -20\text{V};$ $f = 1\text{MHz}$	$C_C$	-	60	-	$\text{pF}$
Transition Frequency	$I_E = -0.05\text{A}; V_{CE} = -6.0\text{V};$ $f = 100\text{MHz}$	$f_T$	-	120	-	$\text{MHz}$

**Note :**

1.  $h_{FE}(2)$  Classification P: 82 to 180, Q: 120 to 270, R: 180 to 390.

## RATING CHARACTERISTIC CURVES ( 2SB1386GP )

Fig.1 Grounded emitter propagation characteristics

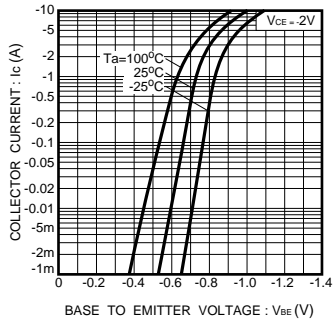


Fig.2 Grounded emitter output characteristics

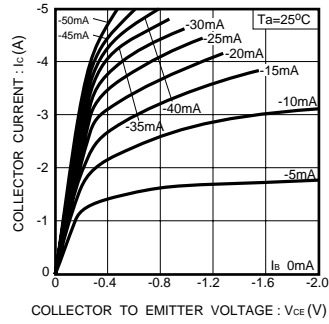


Fig.3 DC current gain vs. collector current ( I )

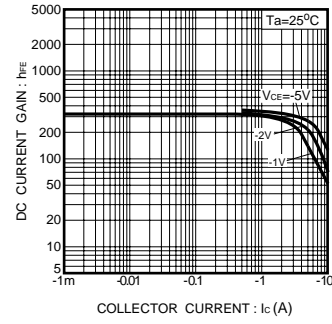


Fig.4 DC current gain vs. collector current ( II )

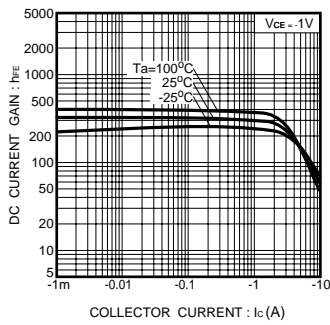


Fig.5 DC current gain vs. collector current ( III )

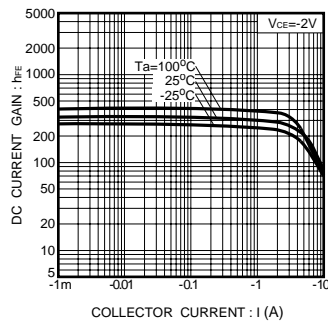


Fig.6 Collector-emitter saturation voltage vs. collector current ( I )

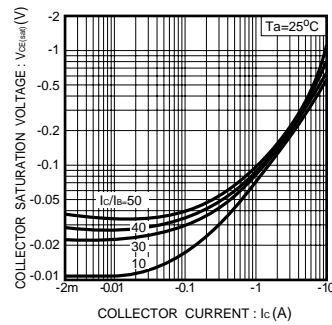


Fig.7 Collector-emitter saturation voltage vs. collector current ( II )

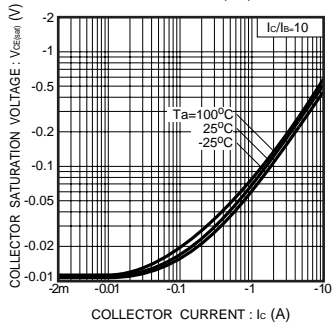


Fig.8 Collector-emitter saturation voltage vs. collector current ( III )

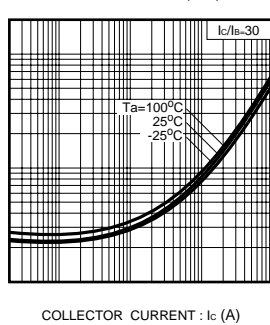


Fig.9 Collector-emitter saturation voltage vs. collector current ( IV )

