CHENMKO ENTERPRISE CO.,LTD

2SA1037MPT

Lead free devices

SURFACE MOUNT
General Purpose PNP Transistor
VOLTAGE 50 Volts CURRENT 0.15 Ampere

APPLICATION
* Small Power Amplifier .

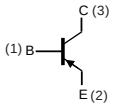
FEATURE
* Small surface mounting type. (SOT-723)
* Low saturation voltage $V_{CE(sat)}$=-0.5V(max.)(I_C=-50mA)
* Low cob. Cob=4.0pF(Typ.)
* P_C= 150mW (Collector power dissipation).

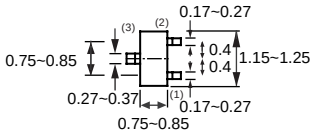
CONSTRUCTION
* PNP Silicon Transistor
* Epitaxial planner type

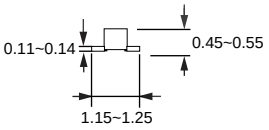
MARKING
* HFE(Q):38
* HFE(R):39
* HFE(S):40

SOT-723

CIRCUIT







Dimensions in millimeters

SOT-723

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	-60	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	-50	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-	-6	Volts
Collector Current DC		I_C	-	-150	mAmps
Collector Power Dissipation	$T_A \leq 25^oC$	P_{TOT}	-	150	mW
Storage Temperature		T_{STG}	-55	+150	°C
Junction Temperature		T_J	-	+150	°C

Note
1. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.
2. Measured at Pulse Width 300 us, Duty Cycle 2%.

2004-06

RATING CHARACTERISTICS (2SA1037MPT)

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector Cut-off Current	V_{CB}=-60V	I_{CBO}	-	-	-0.1	uA
Emitter Cut-off Current	V_{EB}=-6V	I_{EBO}	-	-	-0.1	uA
DC Current Gain	V_{CE}=-6V; Note 1 I_C=-1mA; Note 2	h_{FE}	120	-	560	
Collector-Emitter Saturation Voltage	I_C=-50mA; I_B=-5mA	V_{CEsat}	-	-	-0.5	Volts
Collector-Emitter Breakdown Voltage	I_C=-1mA	V_{CEO}	-50	-	-	Volts
Output Collector Capacitance	I_E=ie=0; V_{CB}=-12V; f=1MHz	C_{ob}	-	4.0	5.0	pF
Transition Frequency	I_E=2mA; V_{CE}=-12V; f=30MHz	f_T	-	140	-	MHz

Note :
1. Pulse test: tp ≤ 300uSec; δ ≤ 0.02.
2. h_{FE}: Classification Q: 120 to 270, R: 180 to 390, S: 270 to 560

RATING CHARACTERISTIC CURVES (2SA1037MPT)

Fig.1 Grounded emitter propagation characteristics

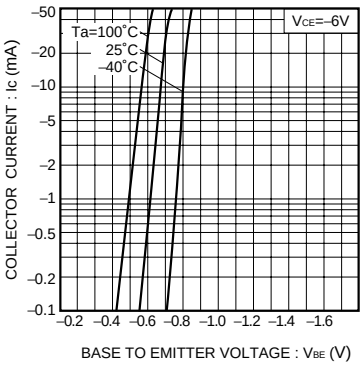


Fig.2 Grounded emitter output characteristics (1)

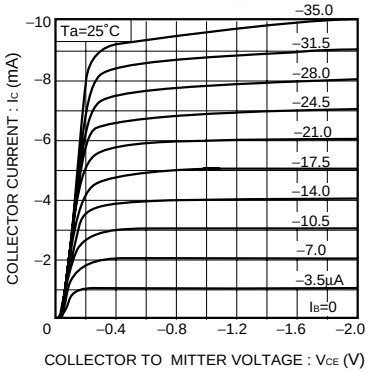
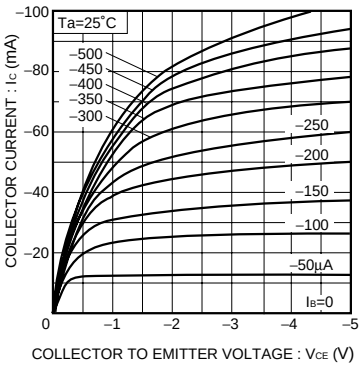


Fig.3 Grounded emitter output characteristics (2)



RATING CHARACTERISTIC CURVES (2SA1037MPT)

Fig.4 Collector-emitter saturation voltage vs. collector current

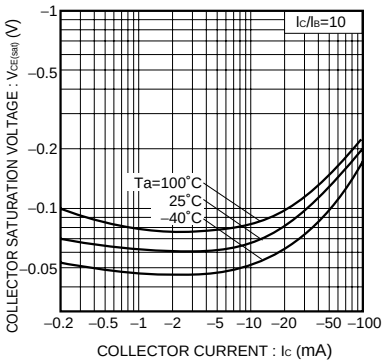


Fig.5 DC current gain vs. collector current

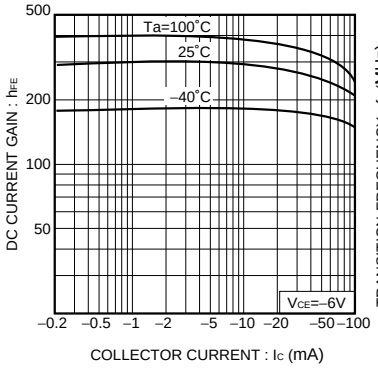


Fig. 6 Gain bandwidth product vs. emitter current