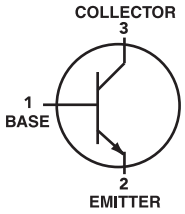
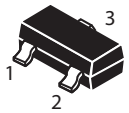
WEITRON

2SC2712

Silicon NPN Transistors

Lead(Pb)-Free





SOT-23

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	50	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current-Continuous	I_C	150	mAdc

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (1) TA=25°C Derate above 25°C	P_D	150 1.2	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	°C/W
Junction and Storage, Temperature	T_J ,Tstg	-55 to +150	°C

DEVICE MARKING

2SC2712Q=LO, 2SC2712Y=LY, 2SC2712GR=LG, 2SC2712BL=LL

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C= 1.0mAdc .I_E=0)	$V_{(BR)CEO}$	50	-	Vdc
Collector-Base Breakdown Voltage (I_C= 100 uA.I_B=0)	$V_{(BR)CBO}$	60	-	Vdc
Emitter-Base Breakdown Voltage (I_E= 100 uAdc.I_C=0)	$V_{(BR)EBO}$	5.0	-	Vdc
Collector Cutoff Current (V_{CB}= 50Vdc,I_E= 0)	I_{CEO}	-	0.1	uAdc
Collector Cutoff Current (V_{CB}= 60Vdc,I_E=0)	I_{CBO}	-	0.1	uAdc
Emitter Cutoff Current (V_{EB}= 5.0 Vdc,I_C=0)	I_{EBO}	-	0.1	uAdc

1.FR-5=1.0 x 0.75 x 0.062 in

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

Characteristics	Symbol	Min	Typ	Max	Unit

ON CHARACTERISTICS

DC Current Gain (I_C= 2 mAdc, V_{CE}= 6.0 Vdc)	h_{FE}	70	-	700	-
Collector-Emitter Saturation Voltage (I_C= 100 mAdc, I_B= 10mAdc)	$V_{CE(sat)}$	-	0.1	0.25	Vdc
Output Capacitance (V_{CB}=10Vdc, I_E=0A, f=1MHZ)	Cob	-	2.0	3.5	PF
Transition Frequency (I_C= 1 mAdc, V_{CE}=10 Vdc)	f_T	80	-	-	MHz

CLASSIFICATION OF h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

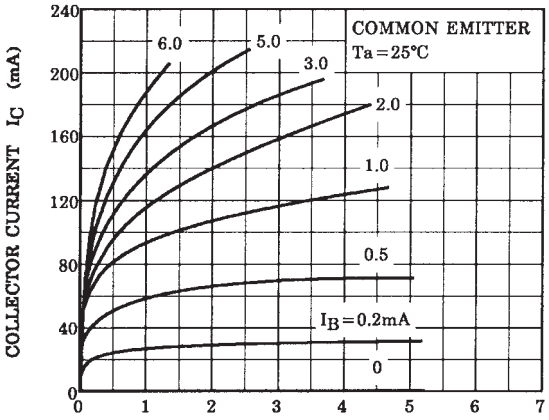


FIG1. COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

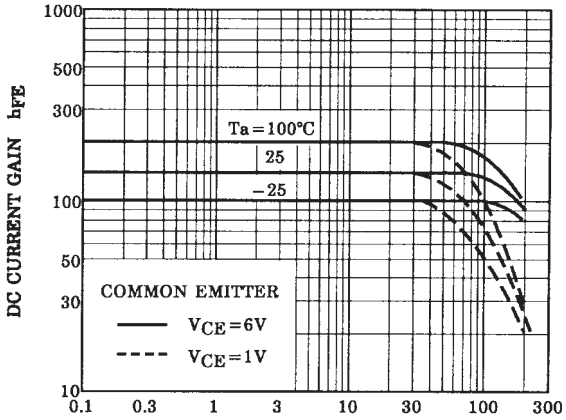


FIG2. COLLECTOR CURRENT I_C (mA)

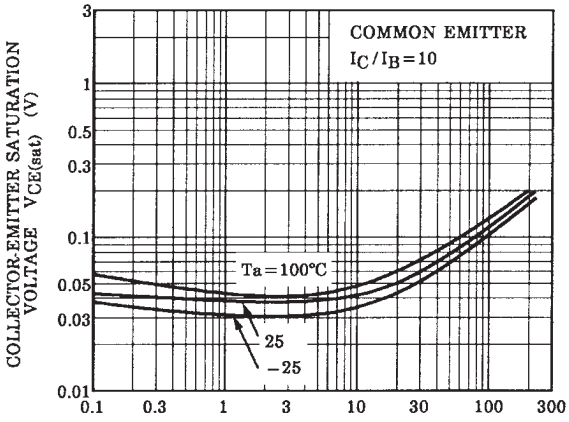


FIG3. COLLECTOR CURRENT I_C (mA)

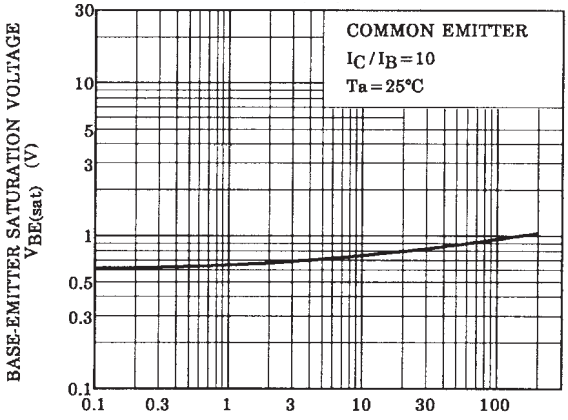


FIG4. COLLECTOR CURRENT I_C (mA)

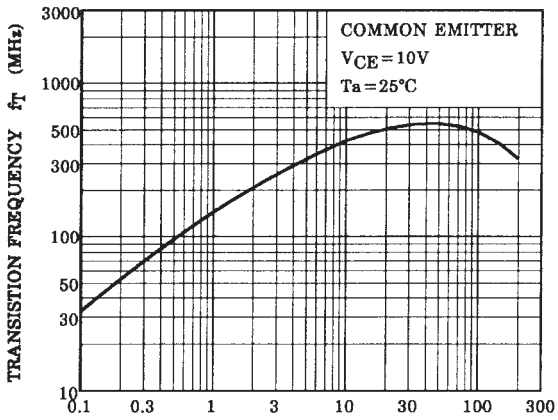


FIG5. COLLECTOR CURRENT I_C (mA)

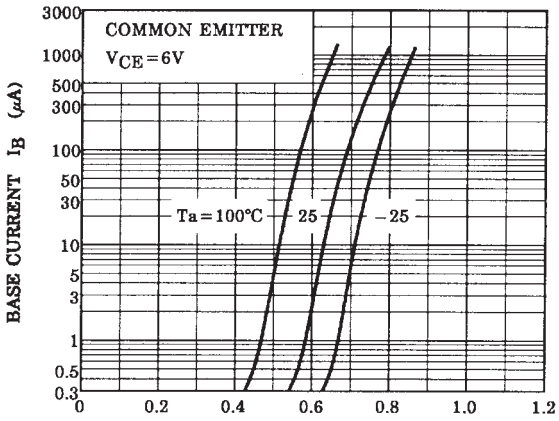


FIG6. BASE-EMITTER VOLTAGE V_{BE} (V)

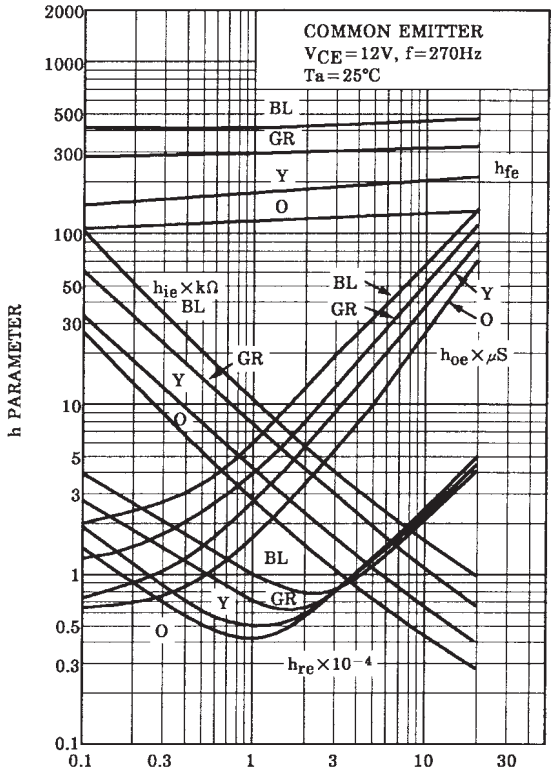


FIG7. COLLECTOR CURRENT I_C (mA)

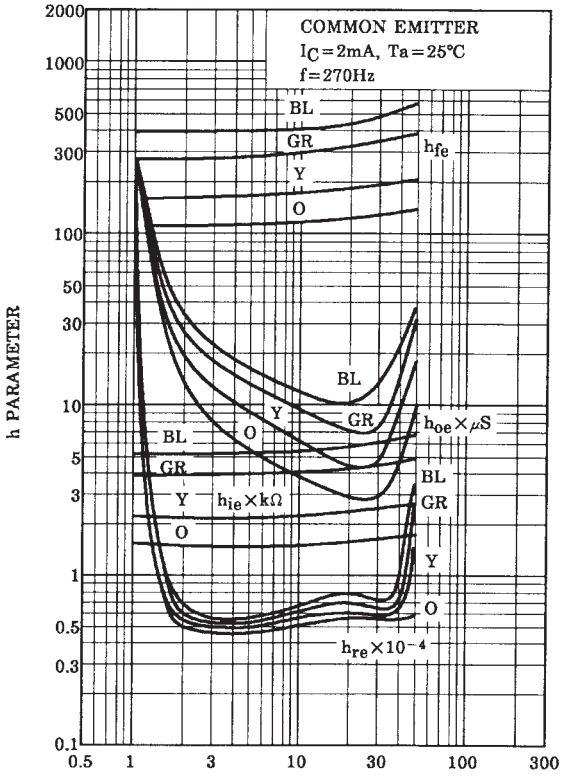


FIG8. COLLECTOR-EMITTER VOLTAGE V_{CE} (V)

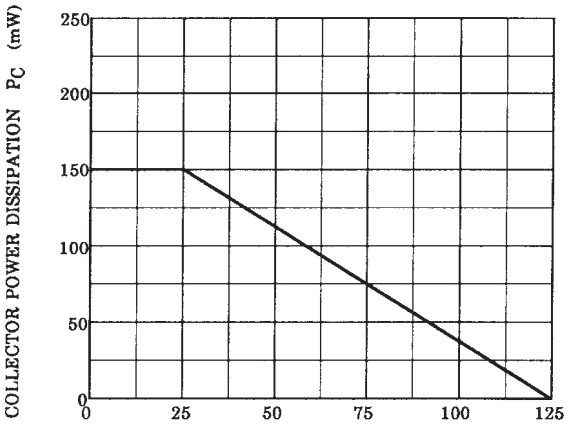
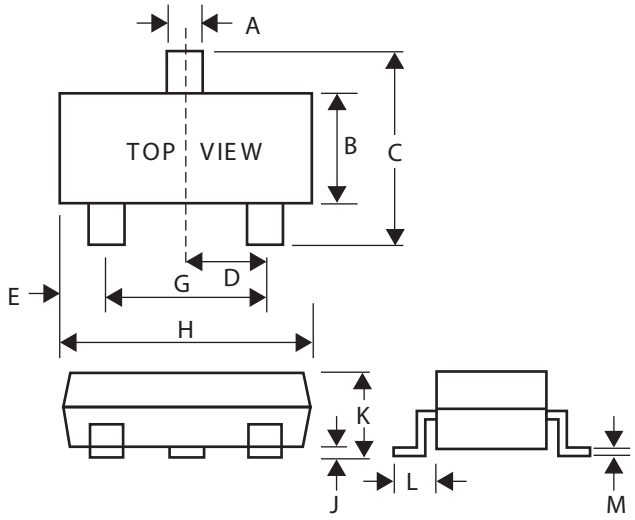


FIG9. AMBIENT TEMPERATURE Ta (°C)

SOT-23 Package Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25