

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low Noise: NF=1dB (Typ.), 10dB (Max.)
- High Voltage and High Current
- Excellent h_{FE} Linearity
- Qualified to AEC-Q101 Standards for High Reliability

CLASSIFICATION OF h_{FE}

Product-Rank	Range	Marking
2SC2712CR-O-C	70~140	LO
2SC2712CR-Y-C	120~240	LY
2SC2712CR-GR-C	200~400	LG
2SC2712CR-BL-C	350~700	LL

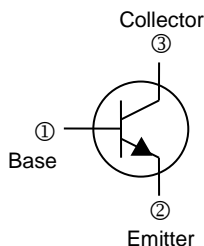
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

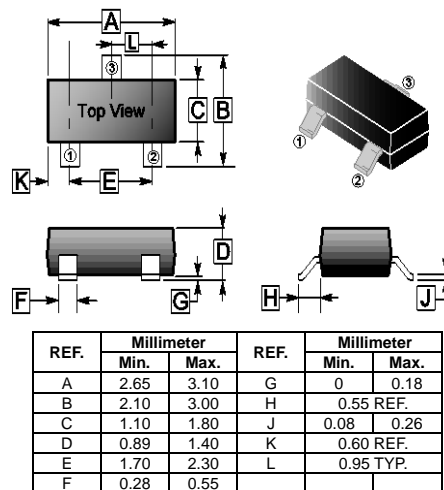
ORDER INFORMATION

Part Number	Type
2SC2712CR-□-C	Lead (Pb)-free and Halogen-free

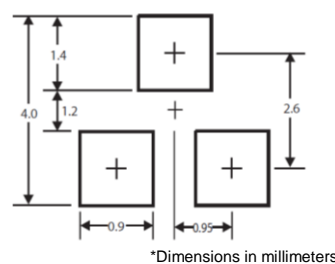
*□= h_{FE} Mark



SOT-23



Mounting Pad Layout



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

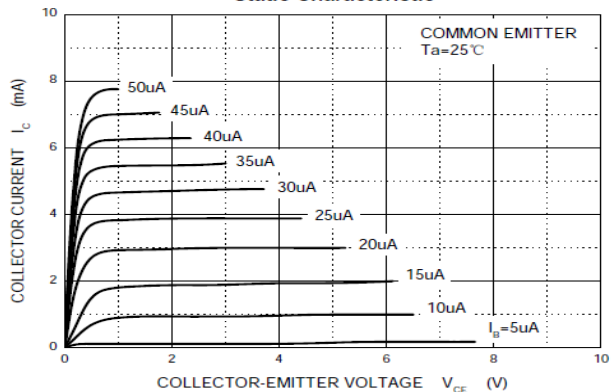
Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	
Emitter-Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	150	mA
Base Current	I_B	30	
Collector Power Dissipation	P_C	150	mW
Junction, Storage Temperature Range	T_J, T_{STG}	-55~125	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

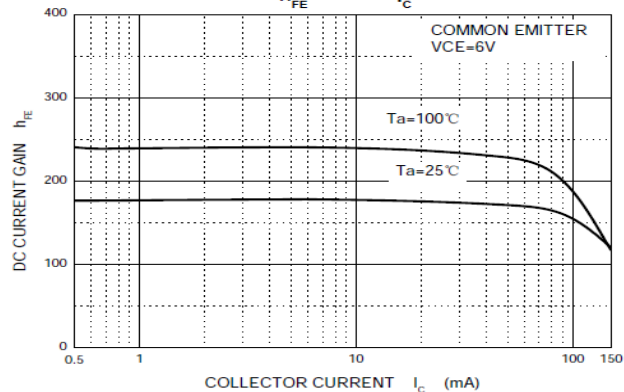
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	50	-	-		$I_C=0.1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-		$I_E=100\mu\text{A}, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=60\text{V}, I_E=0$
Emitter Cut-off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	h_{FE}	70	-	700		$V_{CE}=6\text{V}, I_C=2\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	0.1	0.25	V	$I_C=100\text{mA}, I_B=10\text{mA}$
Transition Frequency	f_T	80	-	-	MHz	$V_{CE}=10\text{V}, I_C=1\text{mA}$
Collector Output Capacitance	C_{ob}	-	2	3.5	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Noise Figure	NF	-	1	10	dB	$V_{CE}=6\text{V}, I_C=0.1\text{mA}, f=1\text{kHz}$

CHARACTERISTIC CURVES

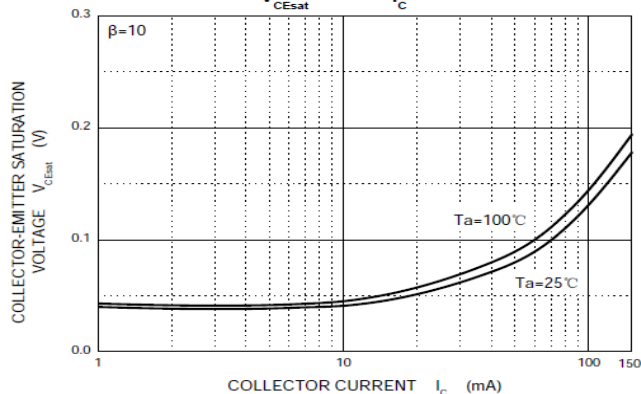
Static Characteristic



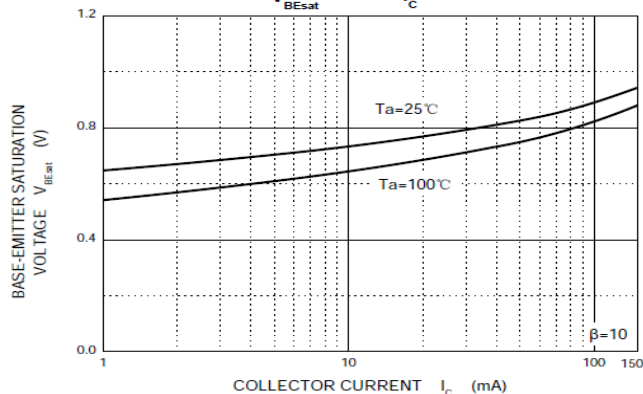
h_{FE} — I_C



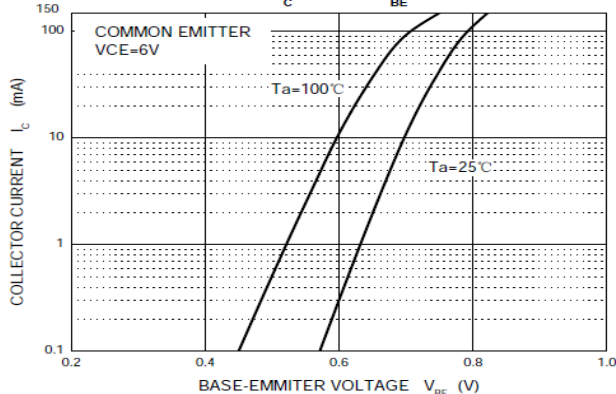
V_{CEsat} — I_C



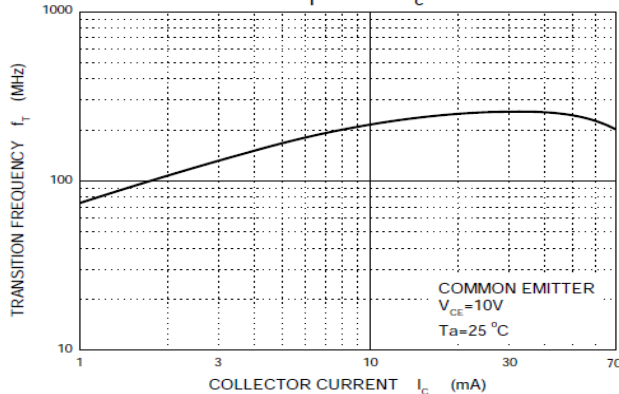
V_{BEsat} — I_C



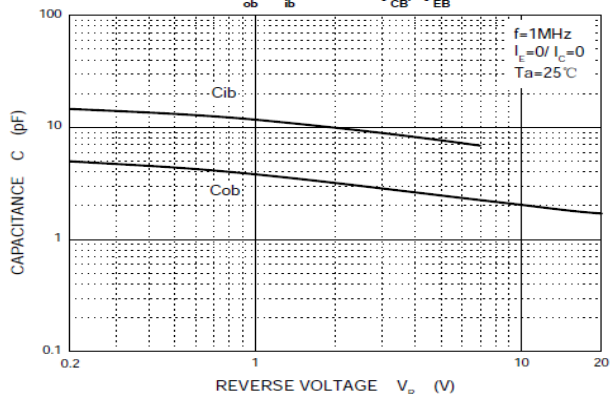
I_C — V_{BE}



f_T — I_C



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

