

# M.C.C.

Micro Commercial Components



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**2SC2712-O**  
**2SC2712-Y**  
**2SC2712-GR**  
**2SC2712-BL**

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Complementary to 2SA1162
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	150	mA
$P_C$	Collector power dissipation	150	mW
$T_J$	Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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### OFF CHARACTERISTICS

$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=60V_{dc}$ , $I_E=0$ )	---	---	0.1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0V_{dc}$ , $I_C=0$ )	---	---	0.1	$\mu A$

### ON CHARACTERISTICS

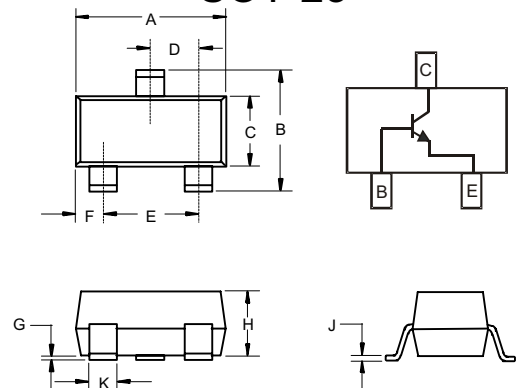
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1mA$ , $I_E=0$ )	50	---	---	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	60	---	---	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	5.0	---	---	V
$h_F$	DC Current Gain* ( $I_C=2mAdc$ , $V_{CE}=6.0V_{dc}$ )	70	---	700	---
$V_{CE(sat)}$	Collector Saturation Voltage* ( $I_C=100mAdc$ , $I_B=10mAdc$ )	---	0.1	0.25	V
$C_{ob}$	Output Capacitance ( $V_{CB}=10V$ , $I_E=0$ , $f=1MHz$ )	---	2.0	3.5	pF
$f_T$	Gain Bandwidth product ( $V_{CE}=10V_{dc}$ , $I_C=1mAdc$ )	80	---	---	MHz
NF	Noise Figure $V_{CE}=6V$ , $I_C=0.1mA$ , $f=1KHz$ , $R_g=10K\Omega$	---	1.0	10	dB

### CLASSIFICATION OF $h_{FE}$

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

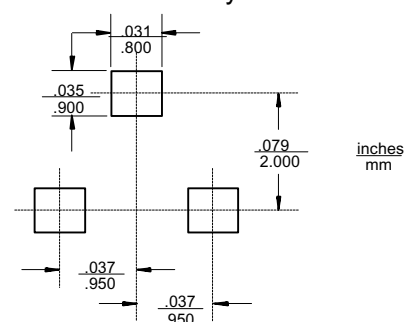
## NPN Plastic-Encapsulate Transistors

### SOT-23

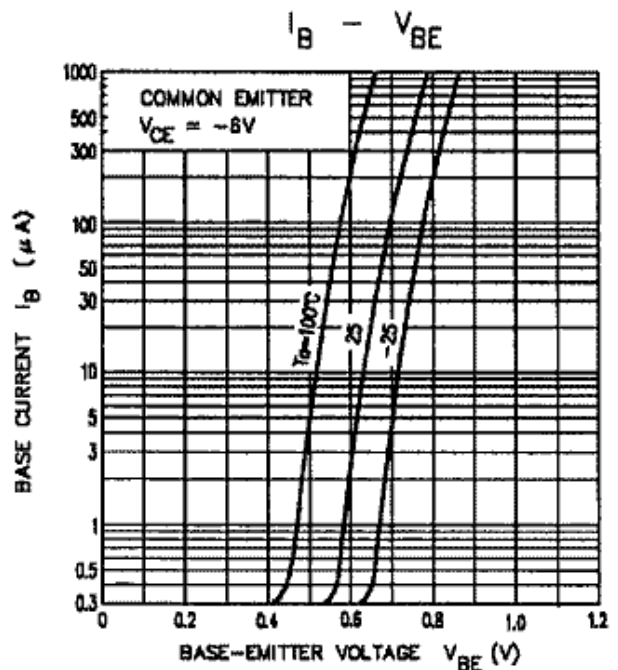
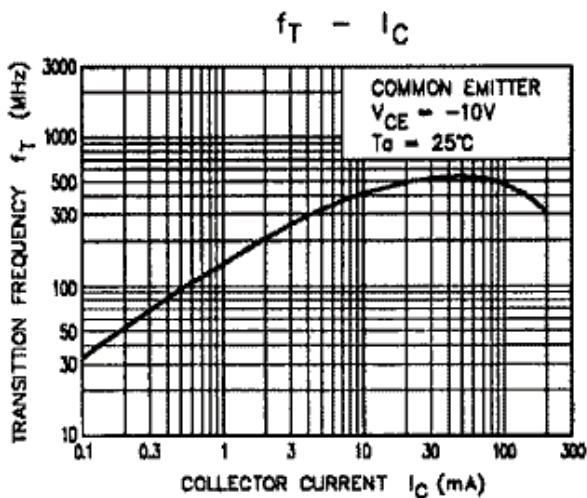
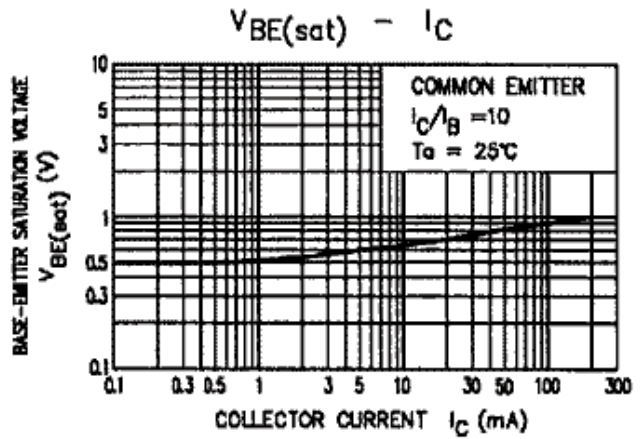
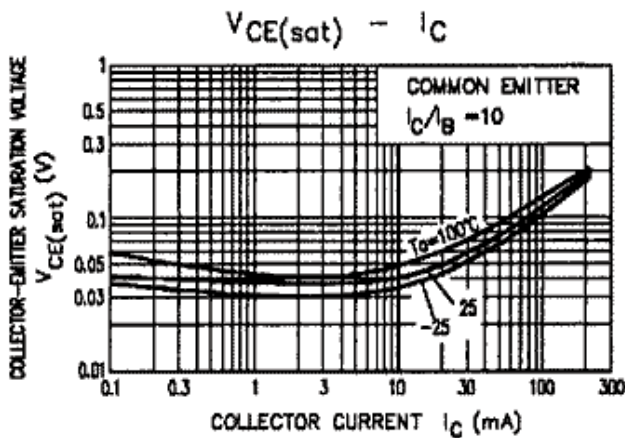
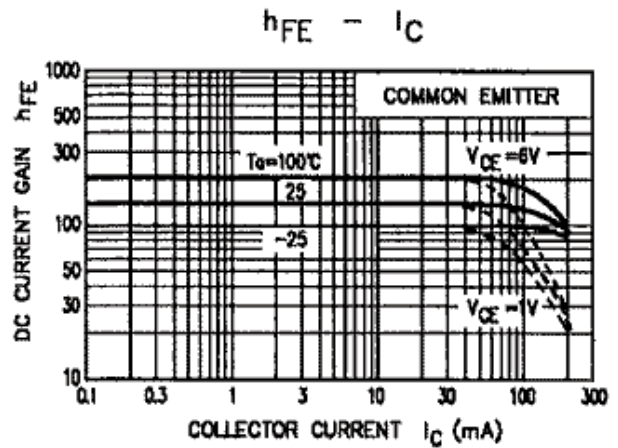
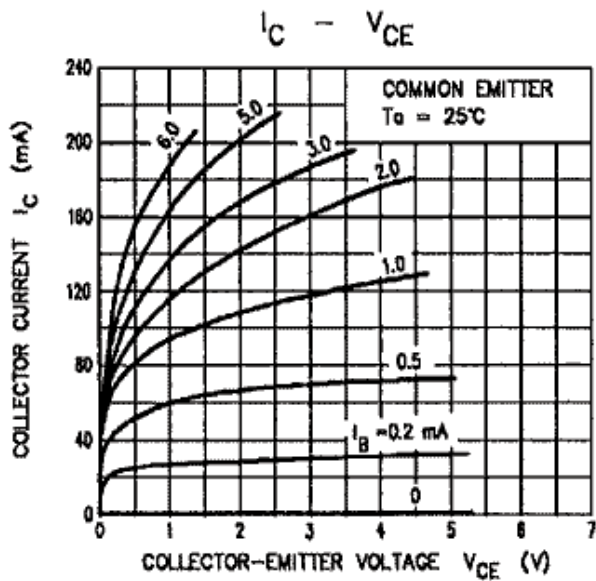


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout



[www.mccsemi.com](http://www.mccsemi.com)



## Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3 Kpcs / Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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