

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

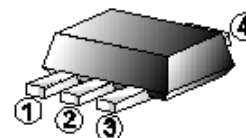
FEATURES

- Switching and Linear Amplification
- High Current and Low Voltage

SOT-89

MARKING

p2F

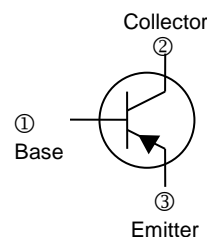


PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch

ORDER INFORMATION

Part Number	Type
MMBT2907Q-C	Lead (Pb)-free and Halogen-free



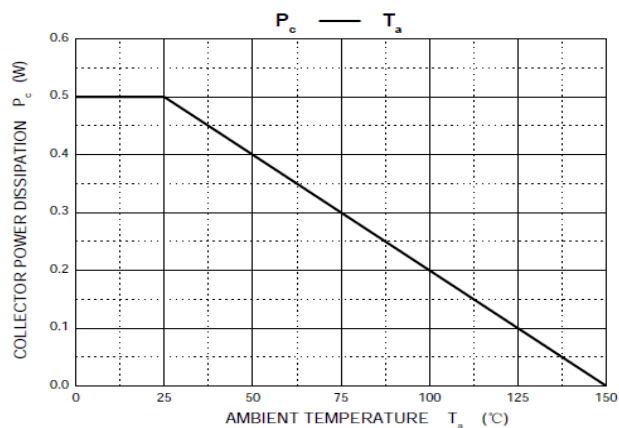
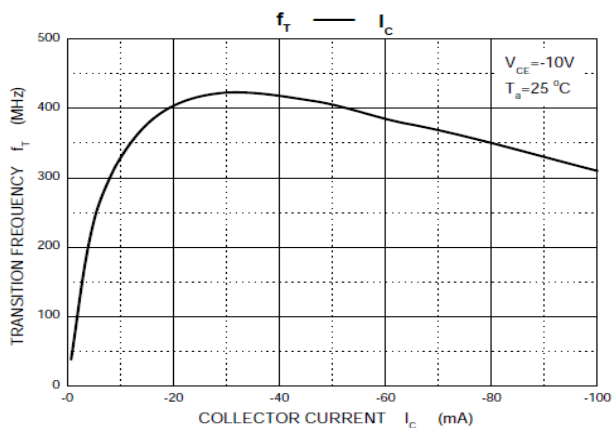
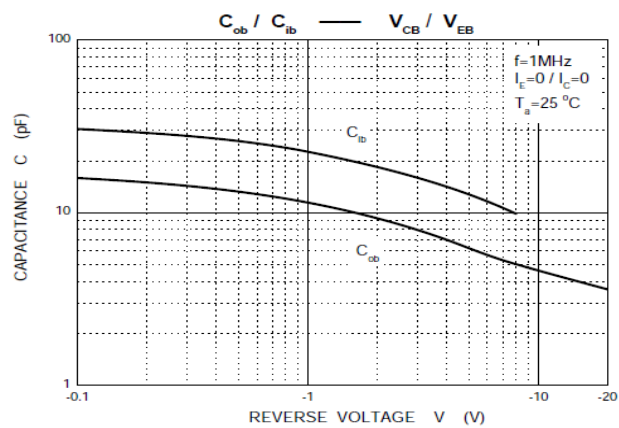
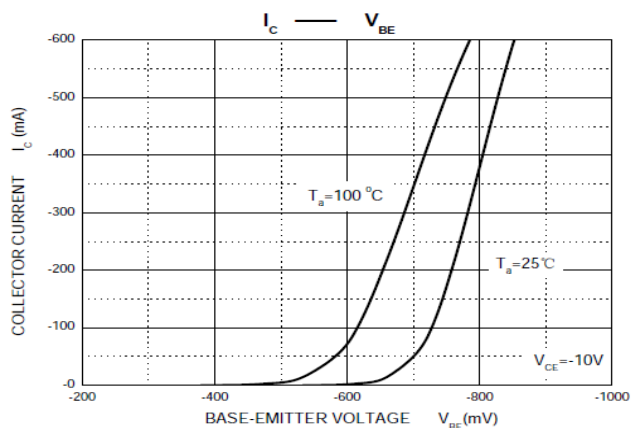
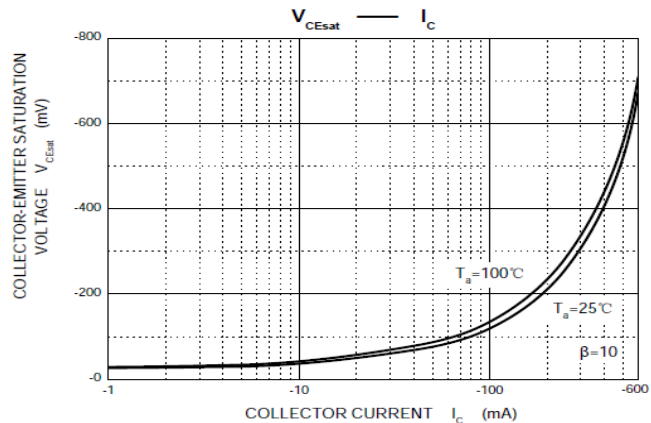
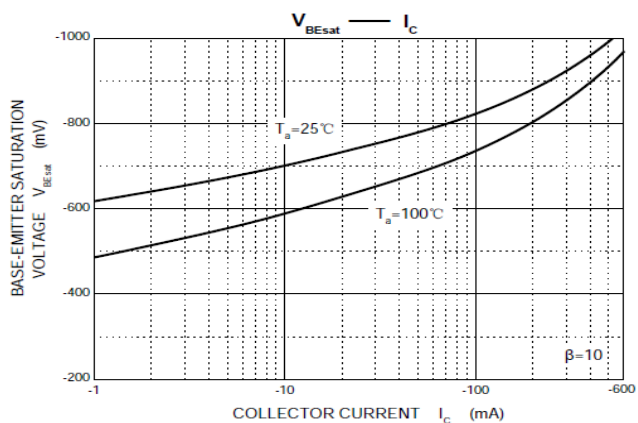
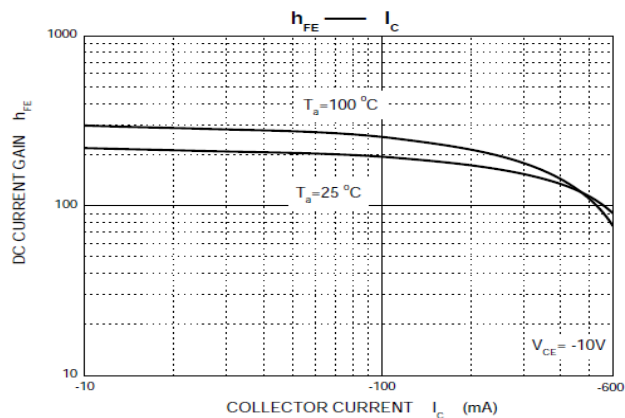
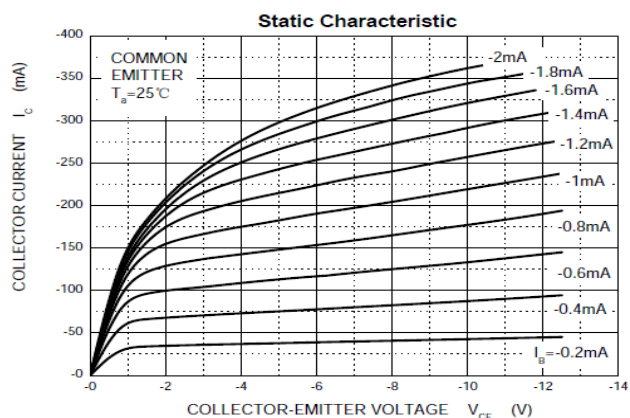
ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	500	mW
Thermal Resistance From Junction-Ambient	$R_{\theta JA}$	250	$^{\circ}\text{C}/\text{W}$
Operation Junction & Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^{\circ}\text{C}$

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

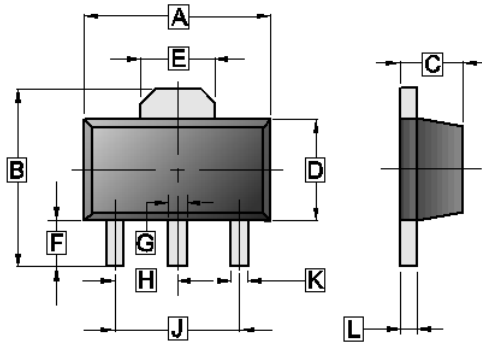
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -1\text{mA}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60	-	-	V	$I_C = -10\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -1\text{mA}, I_C = 0$
Collector Cut-off Current	I_{CBO}	-	-	-0.01	μA	$V_{CB} = -50\text{V}, I_E = 0$
Emitter Cut-off Current	I_{EBO}	-	-	-0.01		$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain	h_{FE}	75	-	-	V	$V_{CE} = -10\text{V}, I_C = -0.1\text{mA}$
		100	-	-		$V_{CE} = -10\text{V}, I_C = -1\text{mA}$
		100	-	-		$V_{CE} = -10\text{V}, I_C = -10\text{mA}$
		100	-	300		$V_{CE} = -10\text{V}, I_C = -150\text{mA}$
		50	-	-		$V_{CE} = -10\text{V}, I_C = -500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.4	V	$I_C = -150\text{mA}, I_B = -15\text{mA}$
		-	-	-1.6		$I_C = -500\text{mA}, I_B = -50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	-1.3		$I_C = -150\text{mA}, I_B = -15\text{mA}$
		-	-	-2.6		$I_C = -500\text{mA}, I_B = -50\text{mA}$
Transition Frequency	f_T	-	200	-	MHz	$V_{CE} = -10\text{V}, I_C = -20\text{mA}, f = 100\text{MHz}$
Delay Time	t_d	-	12	-	nS	$V_{CC} = -30\text{V}$ $I_C = -150\text{mA}$ $I_{B1} = -I_{B2} = -15\text{mA}$
Rise Time	t_r	-	30	-		
Storage Time	t_s	-	300	-		
Fall Time	t_f	-	65	-		

CHARACTERISTIC CURVES



PACKAGE OUTLINE DIMENSIONS

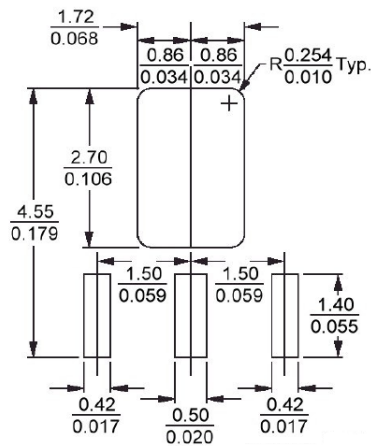
SOT-89



REF.	Millimeter	
	Min.	Max.
A	4.40	4.60
B	3.94	4.25
C	1.40	1.60
D	2.25	2.60
E	1.55 TYP.	
F	0.89	1.20
G	0.40	0.58
H	1.50 TYP.	
J	3.00 TYP.	
K	0.32	0.52
L	0.35	0.44

MOUNTING PAD LAYOUT

SOT-89



*Dimensions in millimeters