Elektronische Bauelemente

MMBT2222Q

0.6A , 75V

NPN Silicon Medium Power Transistor

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

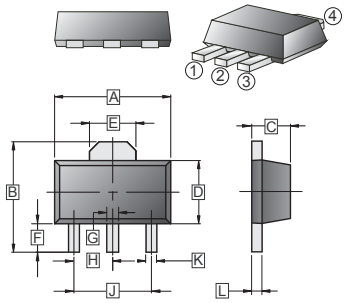
FEATURES

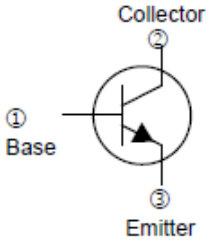
- Epitaxial planar die construction

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch

SOT-89





REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50 TYP	
C	1.40	1.60	J	3.00 TYP	
D	2.25	2.60	K	0.32	0.52
E	1.50	1.85	L	0.35	0.44
F	0.89	1.20			

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_D	0.5	W
Junction and Storage Temperature	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	75	-	-	V	I_C=10μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	40	-	-	V	I_C =10mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	I_E=10μA, I_C=0
Collector Cut-Off Current	I_{CBO}	-	-	10	nA	V_{CB}=60V, I_E=0
Emitter Cut-Off Current	I_{EBO}	-	-	10	nA	V_{EB}=5V, I_C=0
DC Current Gain	h_{FE1}	35	-	-		V_{CE}=10V, I_C=0.1mA
	h_{FE2}	50	-	-		V_{CE}=10V, I_C=1mA
	h_{FE3}	75	-	-		V_{CE}=10V, I_C=10mA
	h_{FE4}	100	-	-		V_{CE}=10V, I_C=150mA
	h_{FE5}	50	-	-		V_{CE}=1V, I_C=150mA
	h_{FE6}	40	-	-		V_{CE}=10V, I_C=500mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$	-	-	1	V	I_C=500mA, I_B=50mA
	$V_{CE(sat)2}$	-	-	0.3	V	I_C=150mA, I_B=15mA
Base-Emitter Saturation Voltage	$V_{BE(sat)1}$	-	-	2	V	I_C=500mA, I_B=50mA
	$V_{BE(sat)2}$	0.6	-	1.2	V	I_C=150mA, I_B=15mA
Transition Frequency	f_T	-	300	-	MHz	V_{CE}=10V, I_C=20mA, f=100MHz
Output Capacitance	C_{ob}	-	8	-	pF	V_{CB}=10V, I_E=0, f=1MHz
Delay Time	T_d	-	10	-	nS	V_{CC}=30V, $V_{BE(Off)}$=0.5V
Rise Time	T_r	-	25	-		I_C=150mA, I_{B1}=15mA
Storage Time	T_S	-	225	-		V_{CC}=30V, I_C=150mA
Fall Time	T_F	-	60	-		I_{B1}= -I_{B2} =15mA

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CHARACTERISTIC CURVES