

NPN Silicon Transistor

Descriptions

- General purpose application
- Switching application

Features

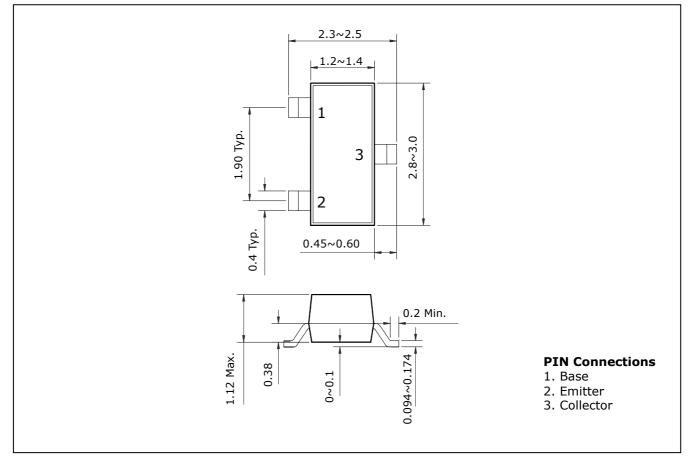
- Low Leakage current
- Low collector saturation voltage enabling low voltage operation
- Complementary pair with MMBT2907A

Ordering Information

Type NO.	Marking	Package Code		
MMBT2222A	1P	SOT-23		

Outline Dimensions

unit : mm



Absolute maximum ratings

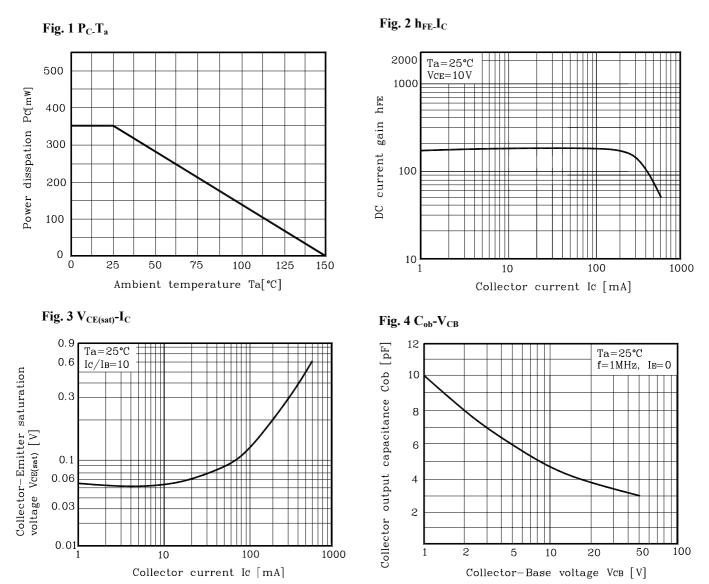
Absolute maximum ratings	Ta=25°C		
Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V _{CBO}	75	V
Collector-Emitter voltage	V _{CEO}	40	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	600	mA
Collector dissipation	P _C *	350	mW
Junction temperature	Tj	150	°C
Storage temperature range	T _{stg}	-55~150	°C

* : Package mounted on 99.5% alumina 10×8×0.6mm

Electrical Characteristics

Electrical Characteristics						Ta=25°C	
Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit	
Collector-Base breakdown voltage	BV_{CBO}	$I_{C}=10\mu A$, $I_{E}=0$	75	-	-	V	
Collector-Emitter breakdown voltage	BV_{CEO}	$I_{C}=1mA$, $I_{B}=0$	40	-	-	V	
Emitter-Base breakdown voltage	BV_{EBO}	I_{E} =10 μ A, I_{C} =0	5	-	-	V	
Collector cut-off current	I_{CBO}	V _{CB} =75V, I _E =0	-	-	20	nA	
DC current gain	h _{FE}	V_{CE} =10V, I_{C} =10mA	100	-	-	-	
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_{C} =150mA, I_{B} =15mA	-	-	0.4	V	
Transition frequency	f_{T}	V _{CE} =20V, I _C =20mA, f=100MHz	250	-	-	MHz	
Collector output capacitance	C _{ob}	V_{CB} =10V, I_{E} =0, f=1MHz	-	-	8	pF	
Delay time	t _d	$V_{CC}=30V_{dc}, V_{BE(off)}=0.5V_{dc},$	-	-	10	ns	
Rise time	t _r	$I_C = 150 \text{mA}_{dc}, I_{B1} = 15 \text{mA}_{dc}$	-	-	25	ns	
Storage time	t _s	$V_{CC}=30V_{dc}$, $I_{C}=150mA_{dc}$,	-	-	225	ns	
Fall Time	t _f	$I_{B1}=I_{B2}=15mA_{dc}$	-	-	60	ns	

Electrical Characteristic Curves



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