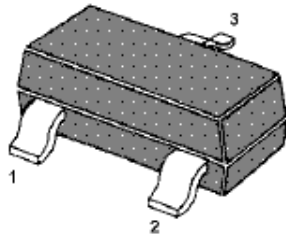


Kingtronics®**MMBT3904**NPN Silicon General Purpose
Transistors

For switching and amplifier applications

1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package**Absolute Maximum Ratings (Ta = 25°C)**

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V _{CB0}	60	V
Collector Emitter Voltage	V _{CEO}	40	V
Emitter Base Voltage	V _{EBO}	6	V
Collector Current	I _c	200	mA
Power Dissipation	P _{tot}	350	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

Characteristics at Ta = 25°C

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
DC Current Gain	h _{FE}	40	-	-
at V _{CE} = 1 V, I _c = 0.1 mA		70	-	
at V _{CE} = 1 V, I _c = 1 mA		100	300	
at V _{CE} = 1 V, I _c = 10 mA		60	-	
at V _{CE} = 1 V, I _c = 50 mA		30	-	
Collector Base Cutoff Current at V _{CB} = 30 V	I _{CBO}	-	50	nA
Base Base Cutoff Current at V _{EB} = 6 V	I _{EBO}	-	50	nA
Collector Base Breakdown Voltage at I _c = 10 μA	V _{(BR)CBO}	60	-	V
Collector Emitter Breakdown Voltage at I _c = 1 mA	V _{(BR)CEO}	40	-	V
Emitter Base Breakdown Voltage at I _E = 10 μA	V _{(BR)EBO}	6	-	V
Collector Emitter Saturation Voltage at I _c = 10 mA, I _B = 1 mA	V _{CE(sat)}	-	0.2	V
at I _c = 50 mA, I _B = 5 mA		-	0.3	
Base Emitter Saturation Voltage at I _c = 10 mA, I _B = 1 mA	V _{BE(sat)}	0.65	0.85	V
at I _c = 50 mA, I _B = 5 mA		-	0.95	
Current Gain Bandwidth Product at V _{CE} = 20 V, I _c = 10 mA, f = 100 MHz	f _T	300	-	MHz
Collector Output Capacitance at V _{CB} = 5 V, I _E = 0, f = 1 MHz	C _{ob}	-	4	pF
Delay Time at V _{CC} = 3 V, V _{BE} = 0.5 V, I _c = 10 mA, I _{B1} = 1 mA	t _d	-	35	ns
Rise Time at V _{CC} = 3 V, V _{BE} = 0.5 V, I _c = 10 mA, I _{B1} = 1 mA	t _r	-	35	ns
Storage Time at V _{CC} = 3 V, I _c = 10 mA, I _{B1} = - I _{B2} = 1 mA	t _s	-	200	ns
Fall Time at V _{CC} = 3 V, I _c = 10 mA, I _{B1} = - I _{B2} = 1 mA	t _f	-	50	ns

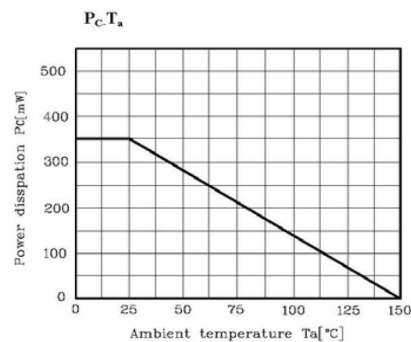
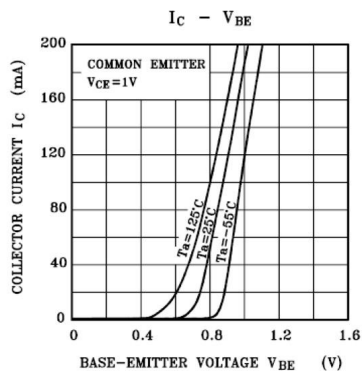
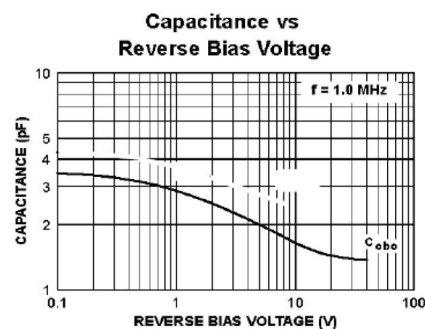
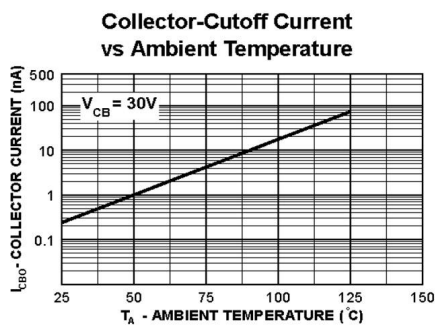
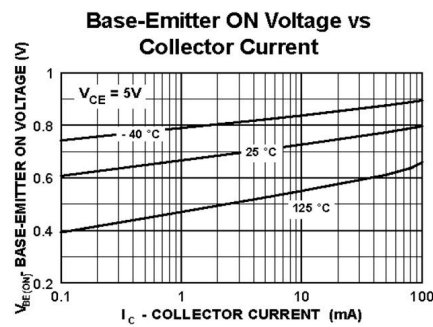
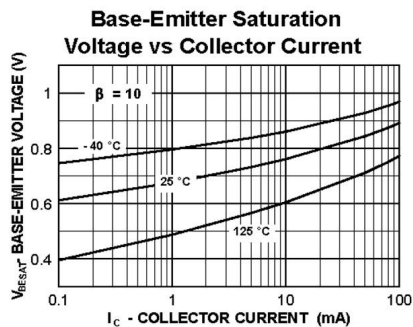
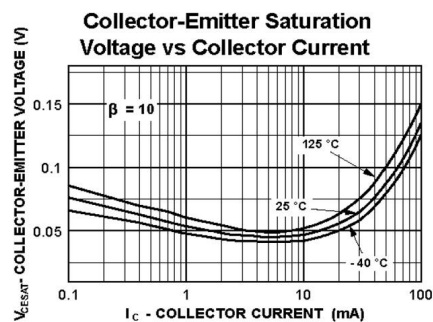
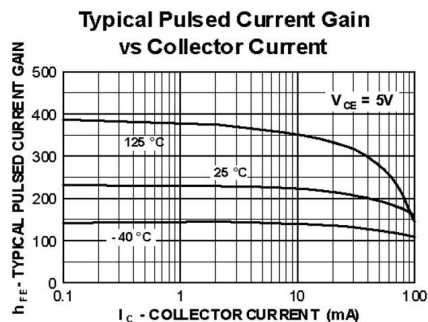
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RATINGS AND CHARACTERISTIC CURVES MMBT3904



Note: Specifications are subject to change without notice.

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