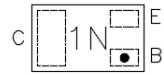
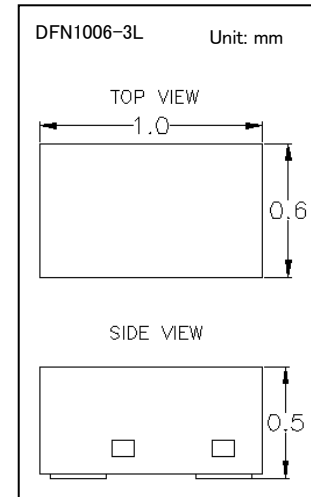
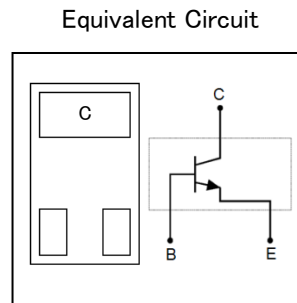


DATA SHEET (Preliminary)

MMBT3904D2

- ◇ Complementary To MMBT3906D2
- ◇ Epoxy Meets UL V-0 Flammability Rating
- ◇ Lead Free Finish/ROHS Compliant
- ◇ For Switching And Amplifier Applications
- ◇ Rugged And Reliable

Device Marking Code	
MMBT3904D2	



Maximum Ratings (Ta=25°C Unless Otherwise Noted)

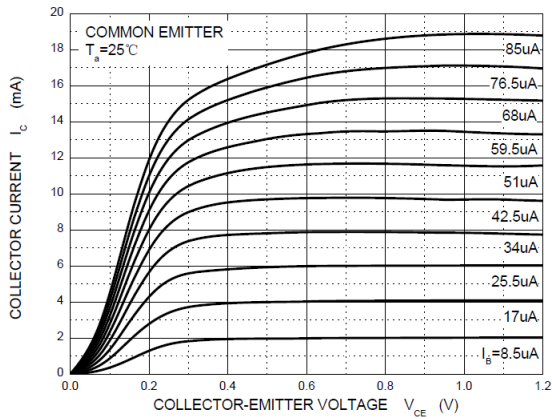
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Continuous Collector Current	200	mA
P_D	Power Dissipation	100	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	1250	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

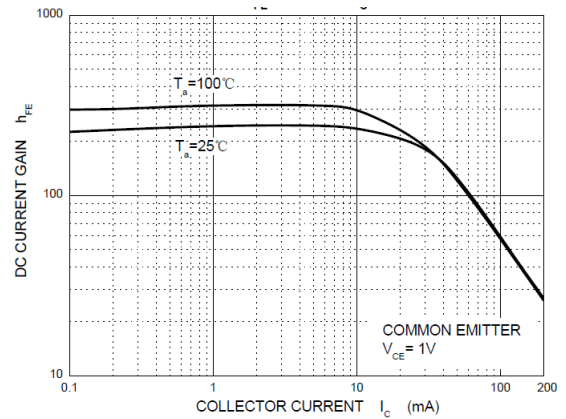
Symbol	Parameter	Test Conditions	Min	Max	Units
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu A, I_E=0$	60		V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1mA, I_B=0$	40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	6		V
I_{CBO}	Collector Cut-Off Current	$V_{CB}=60V, I_E=0$		0.1	uA
I_{CEX}	Collector Cut-Off Current	$V_{CE}=30V, V_{BE(OFF)}=3V$		50	nA

I_{EBO}	Emitter Cut-Off Current	$V_{EB}=5V, I_C=0$		0.1	μA
h_{FE}	Dc Current Gain	$V_{CE}=1V, I_C=10mA$	100	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=50mA, I_B=5mA$		0.3	V
$V_{BE(sat)}$	Base -Emitter Saturation Voltage	$I_C=50mA, I_B=5mA$		0.95	V
f_T	Transition Frequency	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHz
t_d	Delay Time	$V_{CC}=3V, V_{BE(OFF)}=0.5V,$ $I_C=10mA, I_{B1}=1mA$		35	ns
t_r	Rise Time			35	ns
t_s	Storage Time	$V_{CC}=3V, I_C=10mA, I_{B1}=I_{B2}=1mA$		200	ns
t_f	Fall Time			50	ns

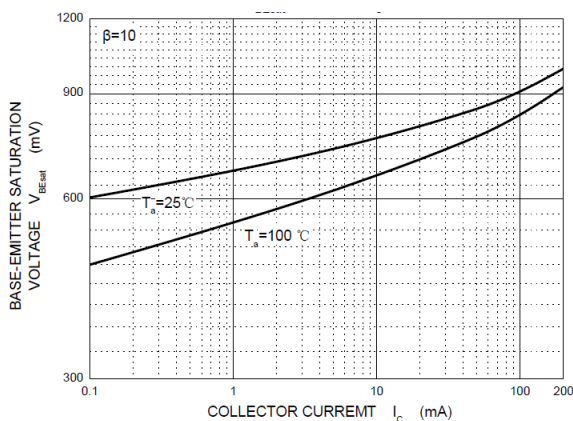
Typical Characteristic



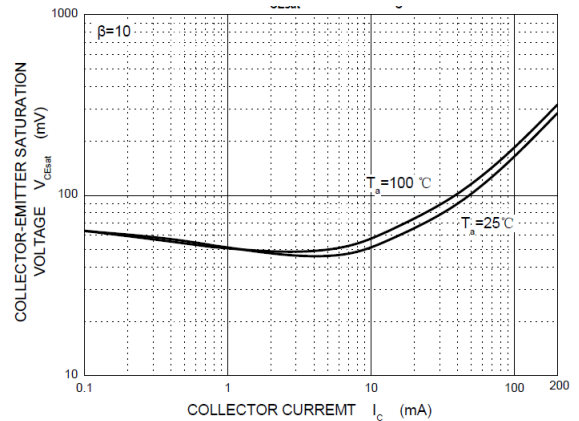
Static Characteristic



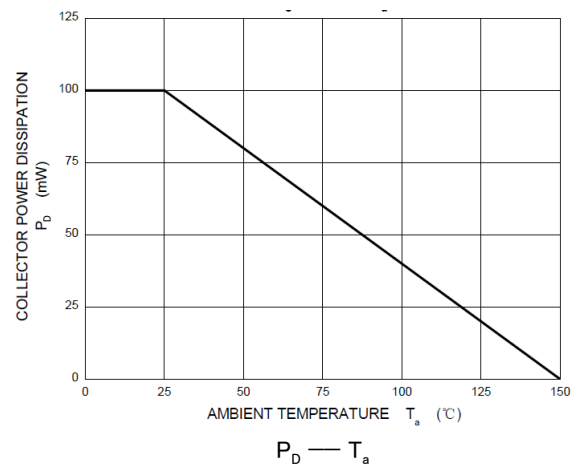
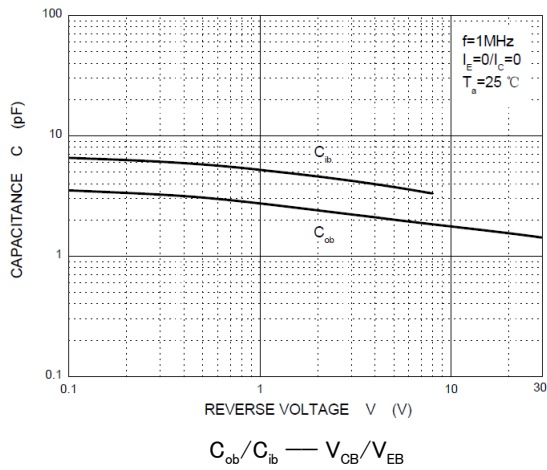
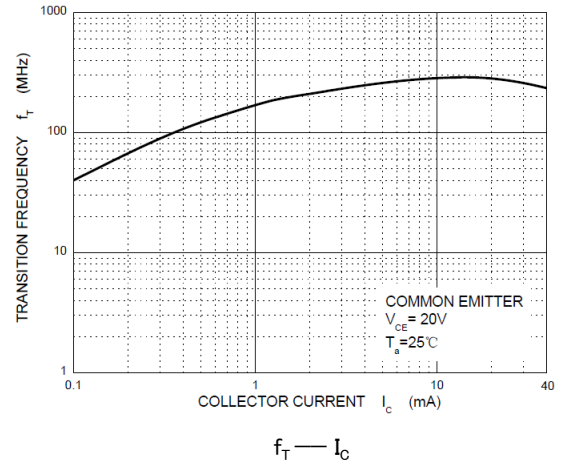
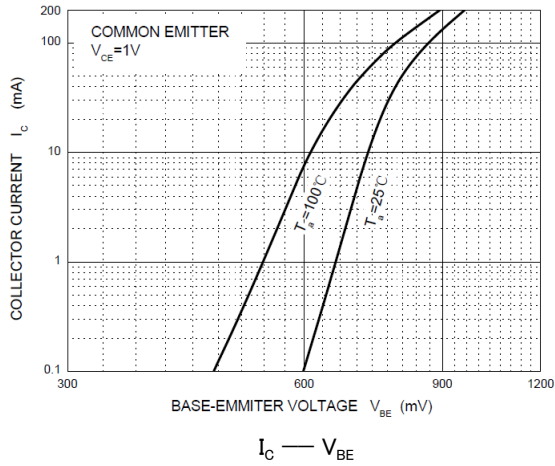
$h_{FE} - I_C$



$V_{BE(sat)} - I_C$



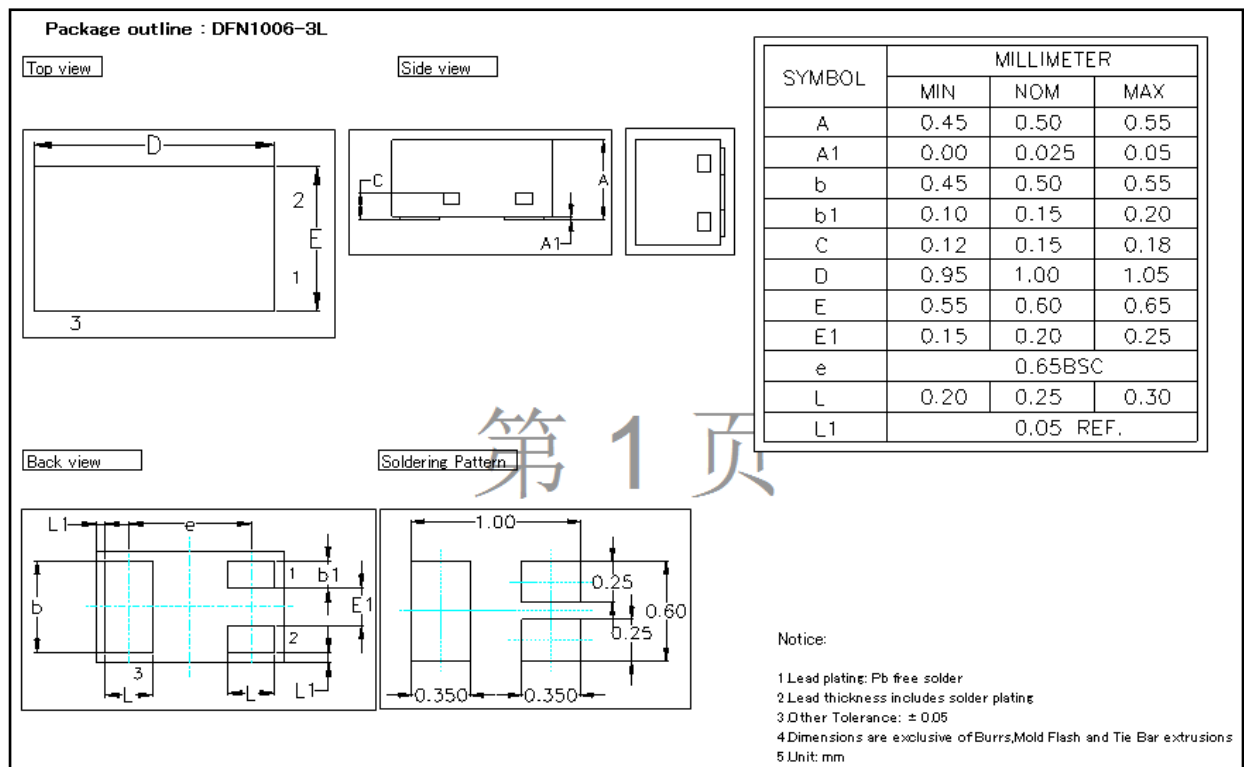
$V_{CE(sat)} - I_C$



Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMBT3904D2	DFN1006-3L	Tape & Reel 10000pcs /7" Reel	8mm	4mm	Conductive	

Package Dimensions



第 1 页

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