

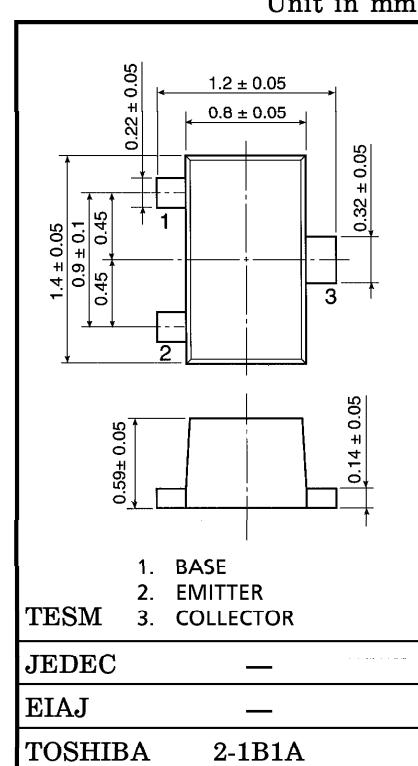
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC5111FT

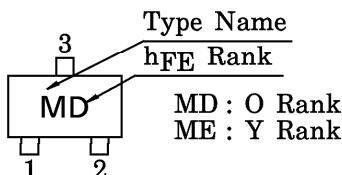
FOR VCO APPLICATION

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	VCBO	20	V
Collector-Emitter Voltage	VCEO	10	V
Emitter-Base Voltage	VEBO	3	V
Base Current	IB	30	mA
Collector Current	IC	60	mA
Collector Power Dissipation	PC	100	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C



MARKING



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} =10V, I _E =0	—	—	0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} =1V, I _C =0	—	—	0.1	μA
DC Current Gain	h _{FE} (Note 1)	V _{CE} =5V, I _C =5mA	80	—	240	—
Transition Frequency	f _T	V _{CE} =5V, I _C =5mA	4	6	—	GHz
Insertion Gain	S _{21e} ²	V _{CE} =5V, I _C =5mA, f=1GHz	7	11	—	dB
Output Capacitance	C _{ob}	V _{CB} =5V, I _E =0, f=1MHz	—	0.7	—	pF
Reverse Transfer Capacitance	C _{re}	(Note 2)	—	0.5	0.9	pF
Collector-Base Time Constant	C _c r _{bb}	V _{CB} =5V, I _C =3mA, f=30MHz	—	5.5	10	ps

(Note 1) : h_{FE} Classification O : 80~160, Y : 120~240(Note 2) : C_{re} is measured by 3 terminal method with capacitance bridge.

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