



Micro Commercial Components



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DMMT3906

Features

- Halogen free available upon request by adding suffix "-HF"
- Epitaxial Planar Die Construction
- Ultra-small surface mount package
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: K3Q

Maximum Ratings

Symbol	Parameter	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{CBO}	Collector-Base Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current-Continuous ⁽¹⁾	-200	mA
P_C	Power dissipation ⁽¹⁾	200	mW
R_{THJA}	Thermal Resistance	625	$^{\circ}C/W$
T_J	Junction Temperature	-55 to +150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS ⁽²⁾

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C = -1.0mA$, $I_B = 0$)	-40	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = -10\mu A$, $I_E = 0$)	-40	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E = -10\mu A$, $I_C = 0$)	-5.0	---	Vdc
I_{CEX}	Collector-Base Cutoff Current ($V_{CE} = -30Vdc$, $V_{EB(OFF)} = -3.0Vdc$)	---	-50	nAdc
I_{BL}	Emitter-Base Cutoff Current ($V_{CE} = -30Vdc$, $V_{EB(OFF)} = -3.0Vdc$)	---	-50	nAdc

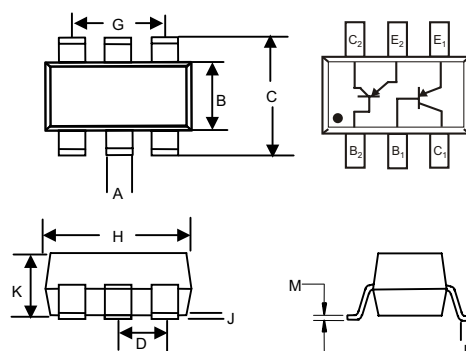
ON CHARACTERISTICS ⁽²⁾

h_{FE}	DC Current Gain ($I_C = -100\mu A$, $V_{CE} = -1.0Vdc$) ($I_C = -1.0mA$, $V_{CE} = -1.0Vdc$) ($I_C = -10mA$, $V_{CE} = -1.0Vdc$) ($I_C = -50mA$, $V_{CE} = -1.0Vdc$) ($I_C = -100mA$, $V_{CE} = -1.0Vdc$)	60 80 100 60 30	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = -10mA$, $I_B = -1.0mA$) ($I_C = -50mA$, $I_B = -5.0mA$)	---	-0.25 -0.40	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C = -10mA$, $I_B = -1.0mA$) ($I_C = -50mA$, $I_B = -5.0mA$)	-0.65 ---	-0.85 -0.95	Vdc

Note: 1. Valid provided that terminals are kept at ambient temperature.

PNP Small Signal Transistors

SOT-363



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

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SMALL SIGNAL CHARACTERISTICS

C_{obo}	Output Capacitance ($V_{CB}=-5.0Vdc$, $f=1.0MHz$, $I_E=0$)	---	4.5	pF
f_T	Current Gain-Bandwidth Product ($V_{CE}=-20Vdc$, $I_C=-10mA$, $f=100MHz$)	250	---	MHz

SWITCHING CHARACTERISTICS

t_d	Delay Time	$V_{CC}=-3.0Vdc$, $I_C=-10mA$, $V_{BE}(off)=0.5Vdc$, $I_{B1}=-1.0mA$	---	35	ns
t_r	Rise Time		---	35	ns
t_s	Storage Time	$V_{CC}=-3.0Vdc$, $I_C=-10mA$, $I_{B1}=I_{B2}=-1.0mA$	---	225	ns
t_f	Fall Time		---	75	ns

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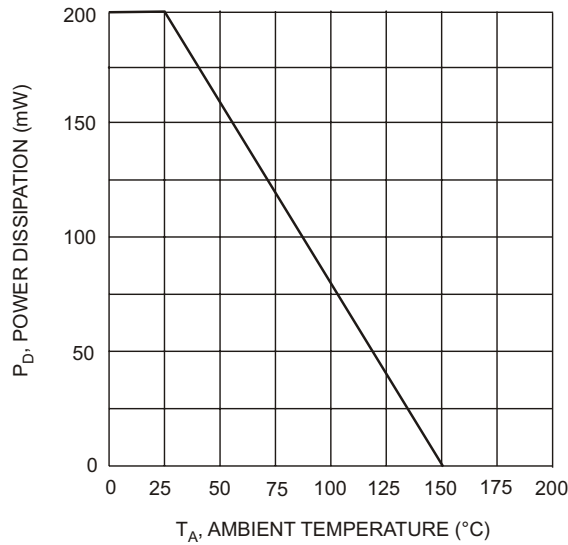


Fig. 1, Max Power Dissipation vs Ambient Temperature

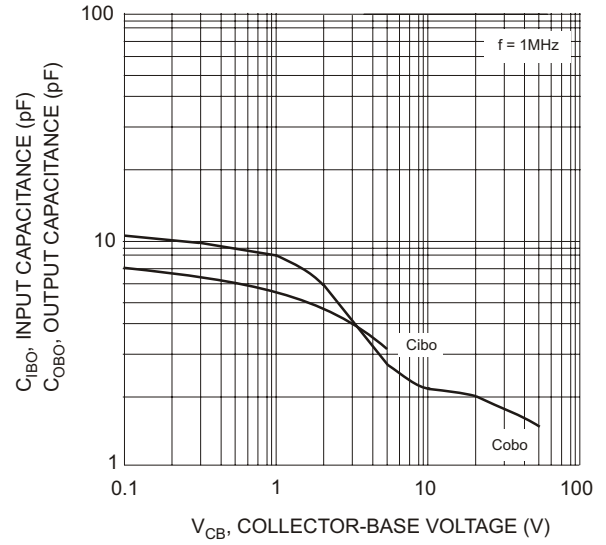


Fig. 2, Input and Output Capacitance vs. Collector-Base Voltage

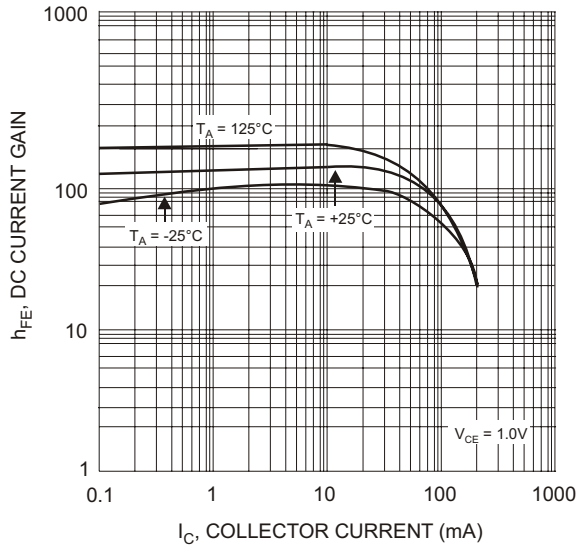


Fig. 3, Typical DC Current Gain vs Collector Current

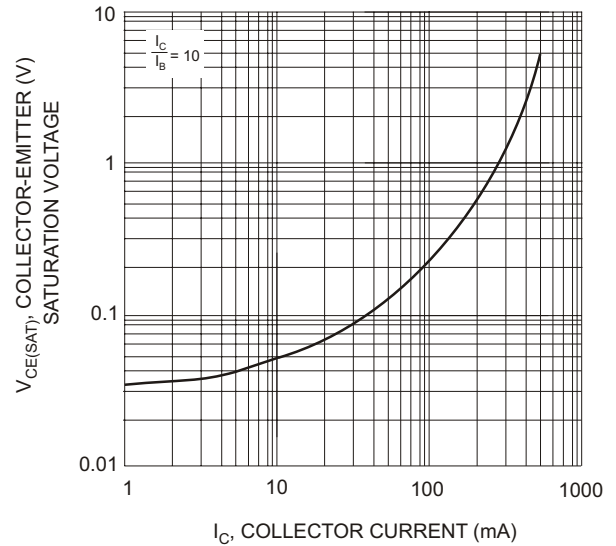


Fig. 4, Typical Collector-Emitter Saturation Voltage vs. Collector Current

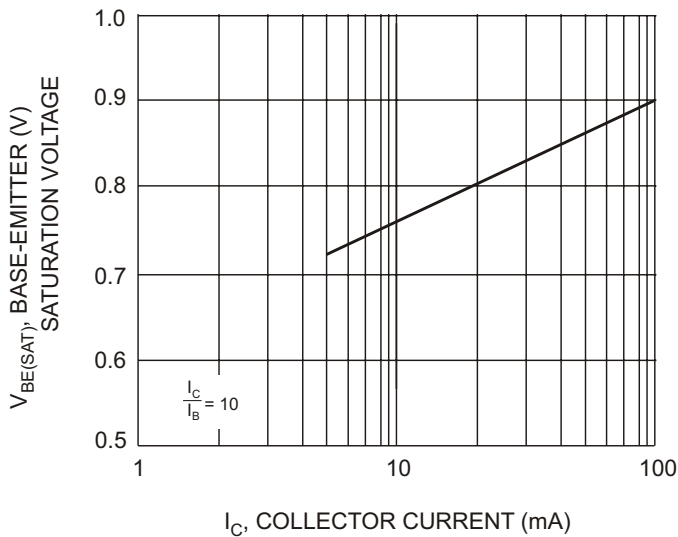


Fig. 5, Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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