

Plastic-Encapsulate Transistors

DUAL TRANSISTOR (NPN+NPN)

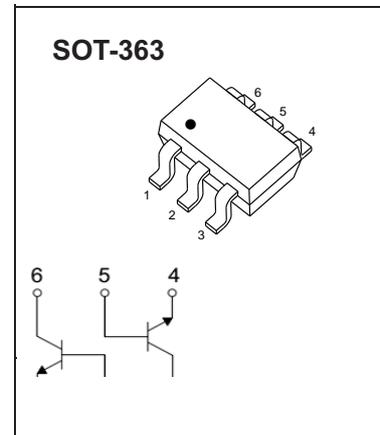
FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available(MMDT9015DW)
- Ideal for Medium Power Amplification and Switching

MARKING:TGL6

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector- Base Voltage	50	V
V_{CE0}	Collector-Emitter Voltage	45	V
V_{EB0}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.1	A
P_C	Collector Power Dissipation	0.2	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CB0}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C=100\mu\text{A}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EB0}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CB0}	$V_{CB}=50\text{V}, I_E=0$			0.1	μA
Collector cut-off current	I_{CE0}	$V_{CE}=35\text{V}, I_B=0$			1	μA
Emitter cut-off current	I_{EB0}	$V_{EB}=4\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	300		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			1	V
Base-emitter voltage	V_{BE}	$V_{CE}=5\text{V}, I_C=2\text{mA}$	0.58		0.7	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=30\text{MHz}$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			3.5	pF
Noise Figure	NF	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, R_g=2\text{k}\Omega, f=1\text{kHz}$			10	dB

