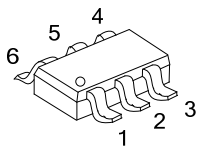
MMDT5401

Preliminary ***DUAL TRANSISTOR***

HIGH VOLTAGE SWITCHING TRANSISTOR



SOT-363

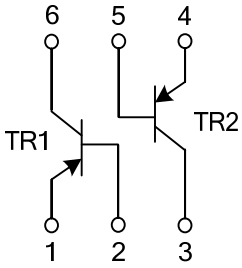
■ DESCRIPTION

The UTC **5401** is a high voltage fast-switching dual PNP transistor. It is characterized with high breakdown voltage, high current gain and high switching speed.

■ FEATURES

* High Collector-Emitter Voltage: V_{CEO}=-150V
* High current gain

■ EQUIVALENT CIRCUIT

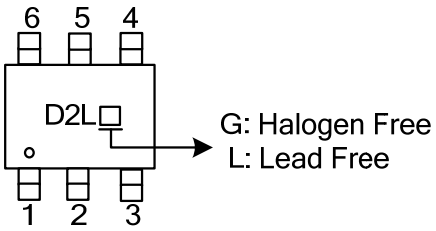


■ ORDERING INFORMATION

Ordering Number		Package							Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
MMDT5401L-AL6-R	MMDT5401G-AL6-R	SOT-363	E1	B1	C2	E2	B2	C1	Tape Reel

MMDT5401L-AL6-R (1)Packing Type (2)Package Type (3)Lead Free	(1) R: Tape Reel (2) AL6: SOT-363 (3) G:Halogen Free, L: Lead Free

■ MARKING



■ ABSOLUATE MAXIUM RATINGS (T_A=25°C unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector -Base Voltage	V_{CBO}	-160	V
Collector -Emitter Voltage	V_{CEO}	-150	V
Emitter -Base Voltage	V_{EBO}	-5	V
DC Collector Current	I_C	-600	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta= 25℃, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	V_{CBO}	I_C=-100μA, I_E=0	-160			V
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=-1mA, I_B=0	-150			V
Emitter-Base Breakdown Voltage	V_{EBO}	I_E=-10μA, I_C=0	-5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=-120V, I_E=0			-50	nA
Emitter Cut-off Current	I_{EBO}	V_{BE}=-3V, I_C =0			-50	nA
DC Current Gain(note)	h_{FE}	V_{CE}=-5V, I_C =-1mA	80			
		V_{CE}=-5V, I_C =-10mA	80	160	400	
		V_{CE}=-5V, I_C =-50mA	80			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-10mA, I_B=-1mA			-0.2	V
		I_C=-50mA, I_B=-5mA			-0.5	
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-10mA, I_B=-1mA			-1	V
		I_C=-50mA, I_B=-5mA			-1	
Current Gain Bandwidth Product	f_T	V_{CE}=-10V, I_C =-10mA, f=100MHz	100		300	MHz
Output Capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz			6.0	pF
Noise Figure	NF	I_C=-0.25mA, V_{CE}=-5V R_S=1kΩ, f=10Hz ~ 15.7kHz			8	dB

Note: Pulse test: PW<300μs, Duty Cycle<2%