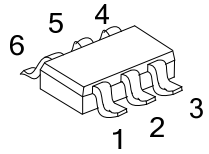
PUMZ1 **Preliminary** ***NPN/PNP SILICON TRANSISTOR***

NPN/PNP GENERAL PURPOSE TRANSISTORS



SOT-363

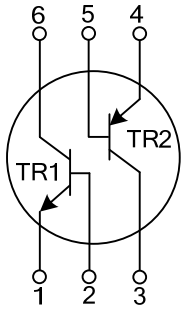
■ DESCRIPTION

The UTC **PUMZ1** is a NPN/PNP transistor, specially used in general purpose of switching and amplifying applications. Thus, two NPN/PNP transistors are operated independently in an SOT-363 package.

■ FEATURES

* Low Current: 100mA (MAX.)
* Low Voltage: 40V (MAX.)
* Less Number of Components And Boardspace Required
* Halogen Free

■ SYMBOL

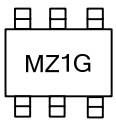


■ ORDERING INFORMATION

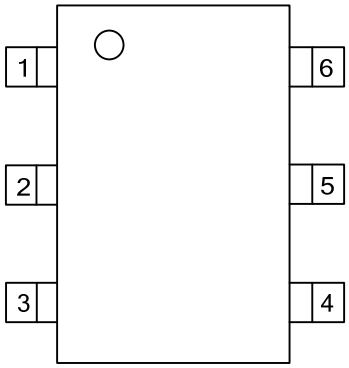
Ordering Number	Package	Packing
PUMZ1G-AL6-R	SOT-363	Tape Reel

PUMZ1G-AL6-R (1)Packing Type (2)Package Type (3)Halogen Free	(1) R: Tape Reel (2) AL6: SOT-363 (3) G: Halogen Free

■ MARKING



■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1,4	Emitter	TR2; TR1
2,5	Base	TR2; TR1
3,6	Collector	TR2; TR1

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Per Transistor; For The PNP Transistor With Negative Polarity				
Collector- Base Voltage		V_{CBO}	50	V
Collector-Emitter Voltage		V_{CEO}	40	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current (DC)		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Peak Base Current		I_{BM}	200	mA
Total Power Dissipation	$T_A \le 25°C$	P_D	200	mW
	$T_A \le 25°C$ (Note2)		300	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°C
Ambient Operating Temperature		T_{OPR}	-65 ~ +150	°C

Notes: 1. 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.
2. Device mounted on an FR4 printed-circuit board.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	416	K/W

Note: Device mounted on an FR4 printed-circuit board.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified.)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Per Transistor; For The PNP Transistor With Negative Polarity							
Collect Cut-off Current		I_{CBO}	V_{CB} =30V, I_E =0			100	nA
			V_{CB} =30V, I_E =0, T_J =150°C			10	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} =4V, I_C =0			100	nA
DC Current Gain		h_{FE}	V_{CE} =6V, I_C =1mA	120			
Collector-Emitter Saturation Voltage(Note)		$V_{CE(SAT)}$	I_C =50mA, I_B =5mA			200	mV
Collector Capacitance	TR1	C_C	$I_E = i_e$ = 0; V_{CB} =12V; f = 1MHz			1.5	pF
	TR2					2.2	pF
Transition Frequency		f_T	V_{CE} =12V, I_C =2mA, f =100MHz	100			MH_Z

Note 1. Pulse test: $t_P \le 300$ μs; $\delta \le 0.02$.