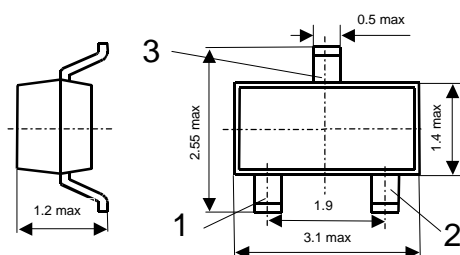


# MMBT6028

Silicon programmable unijunction transistors (PUT's)  
in package SOT-23



**Pinouts:**

**1- Anode, 2- Gate, 3- Cathode**

## Ratings ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter, units	Limits
$V_{AK}$	*Anode to cathode voltage, V	$\pm 40$
$V_{GKF}$	*Gate to cathode forward voltage, V	40
$V_{GKR}$	*Gate to cathode reverse voltage, V	-5
$V_{GAR}$	*Gate to anode reverse voltage, V	40
$I_T$	*DC forward anode current, mA	150
$I_{TRM}$	Repetitive peak forward current, A	
	100 $\mu\text{s}$ Pulse width, 1% duty cycle	1
	*20 $\mu\text{s}$ Pulse width, 1% duty cycle	2
$P_T$	*Power dissipation, mW	300

\* - Anode positive,  $R_{GA} = 1000\Omega$ ;  
Anode negative,  $R_{GA} = \text{open}$

## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter, units, test conditions	Limits		
		min	typ	max
$I_P$	Peak current, $\mu\text{A}$ , $V_S = 10\text{V}$ , $R_G = 10\text{k}\Omega$		0.7	1
$I_{GAO}$	Gate to anode leakage current, nA, $V_S = 40\text{V}$ , cathode open		1	10
$I_{GKS}$	Gate to cathode leakage current, nA, $V_S = 40\text{V}$ , anode to cathode shorted		5	50
$V_F$	Forward voltage, V, $I_F = 50\text{mA}$ Peak		0.8	1.5
$V_O$	Peak output voltage, V, $V_G = 20\text{V}$ , $C_C = 0.2\ \mu\text{F}$	6	11	
$V_T$	Offset voltage, V $V_S = 10\text{V}$ , $R_G = 10\text{k}\Omega$	0.2	0.35	0.6
$I_V$	Valley current, $\mu\text{A}$ , $V_S = 10\text{V}$ , $R_G = 10\text{k}\Omega$	25	150	
$t_R$	Pulse voltage rise time, ns $U_B = 20\text{V}$ , $C_C = 0.2\ \mu\text{F}$		40	80