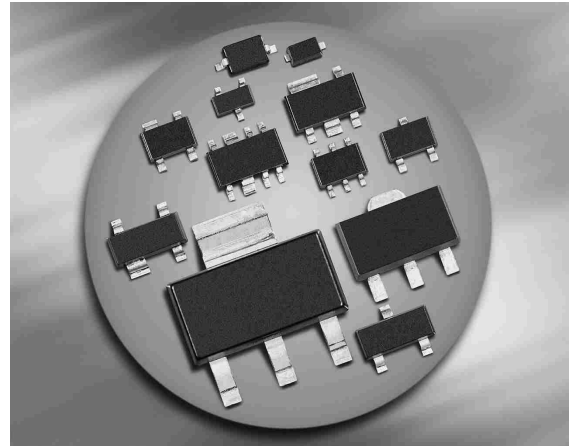
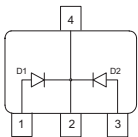


Silicon Schottky Diode

- Power rectifier diode
- Parallel connection for maximum I_F per package
- Low forward voltage drop
- For power supply
- For clamping and protection



BAT70-05



ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Package	Configuration	Marking
BAT70-05	SOT223	common cathode	BAT70-05

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R		V
$T_S \leq 75^\circ\text{C}$		50	
$T_S \leq 50^\circ\text{C}$		70	
Peak reverse voltage ¹⁾	V_{RM}	70	
$T_S \leq 70^\circ\text{C}, t \leq 10\text{ms}$			
Forward current	I_F	1.5	A
Surge forward current, $t \leq 10\text{ms}$	I_{FSM}	5	
Average forward current (50/60Hz, sinus)	I_{FAV}	1.5	
Total power dissipation	P_{tot}		W
$T_S \leq 130^\circ\text{C}$		1.5	
$T_S \leq 120^\circ\text{C}$, both diodes		3	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

¹ see DC/pulse derating curve $V_R = f(T_A)$

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}	≤ 12	

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Reverse current	I_R				mA
$V_R = 50\text{ V}$		-	0.01	0.1	
$V_R = 70\text{ V}$		-	0.06	1	
$V_R = 50\text{ V}, T_A = 75^\circ\text{C}$		-	1	15	
Forward voltage	V_F				V
$I_F = 1\text{ mA}$		-	0.2	-	
$I_F = 10\text{ mA}$		-	0.26	0.35	
$I_F = 100\text{ mA}$		-	0.33	-	
$I_F = 1.5\text{ A}$		-	0.52	0.6	

AC Characteristics

Diode capacitance	C_T				pF
$V_R = 0, f = 1\text{ MHz}$		-	236	-	
$V_R = 10\text{ V}, f = 1\text{ MHz}$		-	48	60	

¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Permissible Reverse voltage $V_R = f(T_A)$

