SIGNAL SCHOTTKY DIODES

SGS-THOMSON MICROELECTRONICS


MINIMELF


MELF


DO35


DO41


SOT23

UHF AND ULTRA–FAST SWITCHING (T_A = 25°C)

Type	V_{RRM} (V)	I_F (mA)	I_R * @ V_R max (μA)	(V)	V_F * @ I_F max (V)	(mA)	C @ V_R max F = 1 MHz (pF)	(V)	Dynamic parameters	Package
BAR 19	4	30	0.25	3	0.6	10	1	1	F = < 6 dB / 1 GHz	DO35 GLASS
BAT 29	5	30	0.05	1	0.55	10	1	0	Q_S < 3 pC /10 mA	
BAT 19	10	30	0.1	5	0.4	1	1.2	0	τ < 100 ps /20 mA	
BAT 45	15	30	0.1	6	0.5	10	1.1	1	t_{rr} < 1 ns / 3 mA	
• **1N 5711**	**70**	**15**	**0.2**	**50**	**0.41**	**1**	**2**	**0**	**τ < 100 ps / 5 mA**	
• **1N 6263**	**60**	**15**	**0.2**	**50**	**0.41**	**1**	**2.2**	**0**	**τ < 100 ps / 5 mA**	
TMM BAT 29	5	30	0.05	1	0.55	10	1	0	Q_S < 3 pC /10 mA	MINIMELF GLASS
TMM BAT 19	10	30	0.1	5	0.4	1	1.2	0	τ < 100 ps /20 mA	
TMM BAT 45	15	30	0.1	6	0.5	10	1.1	1	t_{rr} < 1 ns / 3 mA	
• **TMM 6263**	**60**	**15**	**0.2**	**50**	**0.41**	**1**	**2.2**	**0**	**τ < 100 ps** / 5 mA	

• **Preferred device**.

F: Mixer noise figure.

Q_S: Stored charges (B-line)

τ: Minority carrier file time (Krakauer method).

* Pulse test tp ≤ 300 μs, δ < 2%

SGS-THOMSON MICROELECTRONICS

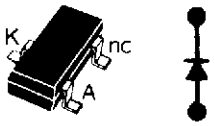
SIGNAL SCHOTTKY DIODES

UHF AND ULTRA–FAST SWITCHING (T_A= 25°C)

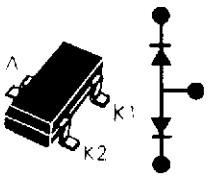
Type	Marking	Config.	Maximum ratings		I_R* @ VR max		V_F* @ I_F min	V_F* @ I_F max		C @ V_R F = 1 MHz max		Dynamic parameters	Package
			V_{RRM} (V)	I_F (mA)	(µA)	(V)	(V)		(mA)	(pF)	(V)		
BAR 18	D76	1	70	15	0.2	50		0.41	1	2	0	τ < 100ps @ 5mA	SOT23 PLASTIC
• **BAR 42**	**D94**	**1**	**30**	**100**	**0.5**	**25**		**0.4**	**10**	**7#**	**1**	**t_{rr} < 5ns @ 10mA**	
• **BAR 43**	**D95**	**1**	**30**	**100**	**0.5**	**25**	**0.26**	**0.33**	**2**	**7#**	**1**	**t_{rr} < 5ns @ 10mA**	
BAR 46	S46	1	100	150	5	75	–	0.25	0.10	6#	1	t_{rr} < 5ns @ 10µA	
BAS 70–06	D98	2	70	15	0.2	50		0.41	1	2	0	τ < 100ps @ 5mA	
• **BAR 43 A**	**DB1**	**2**	**30**	**100**	0.5	25	**0.26**	**0.33**	**2**	**7#**	**1**	**t_{rr} < 5ns @ 10mA**	
BAR 46 A	A46	2	100	150	5	75	–	0.25	0.10	6#	1	t_{rr} < 5ns @ 10µA	
BAS 70–05	D97	3	70	15	0.2	50		0.41	1	2	0	τ < 100ps @ 5mA	
• **BAR 43 C**	**DB2**	**3**	**30**	**100**	**0.5**	**25**	**0.26**	**0.33**	**2**	**7#**	**1**	**t_{rr} < 5ns @ 10mA**	
BAS 70–04	D96	4	70	15	0.2	50		0.41	1	2	0	τ < 100ps @ 5mA	
• **BAR 43 S**	**DA5**	**4**	**30**	**100**	**0.5**	**25**	**0.26**	**0.33**	**2**	**7#**	**1**	**t_{rr} < 5ns @ 10mA**	

• **Preferred device.**
F Mixer noise figure.
τ Minority carrier lifetime (Krakauer method).
Typical value.
* pulse test tp ≤ 300 µs, δ < 2%.

Configurations



(1)



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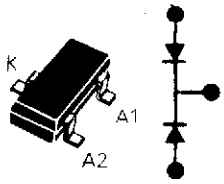

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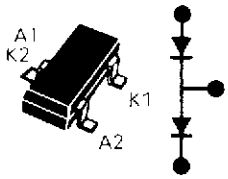

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SIGNAL SCHOTTKY DIODES

SGS-THOMSON MICROELECTRONICS

GENERAL PURPOSE (T_A= 25°C)

Type	V_{RRM} (V)	I_F (mA)	I_R * @ V_R max (μ)	(V)	V_F * @ I_F max (V)	(mA)	C @ V_R F = 1 MHz Typ (pF)	(V)	Dynamic parameters	Package
• **BAT 42**	**30**	**200**	**0.5**	**25**	**0.4** **0.65** **1**	**10** **50** **200**	**7**	**1**	**t_{rr} < 5 ns /10 mA**	DO35 GLASS
BAT 43	30	200	0.5	25	0.45 1	15 200	7	1	η > 80% /45 MHz	
• **BAT 47**	**20**	**350**	**4**	**10**	**0.25** **0.4** **1**	**0.1** **10** **300**	**12**	**1**	**t_{rr} < 10 ns /10 mA**	
• **BAT 48**	**40**	**350**	**2**	**10**	**0.25** **0.4** **0.9**	**0.1** **10** **500**	**12**	**1**	**t_{rr} < 10 ns /10 mA**	
• **BAT 41**	**100**	**100**	**0.1**	**50**	**0.45** **1**	**1** **200**	**2**	**1**		
• **BAT 46**	**100**	**150**	**2**	**50**	**0.25** **0.45** **1**	**0.1** **10** **250**	**6**	**1**		
• **BAT 49**	**80**	**500**	**200**	**80**	**0.32** **0.42** **1**	**10** **100** **1000**	**120**	**0**		DO41 GLASS
• **BYV 10–20**	**20**	**1000**	**500**	**20**	**0.55** **0.85**	**1000** **3000**	**220**	**0**		
• **BYV 10–30**	**30**	**1000**	**500**	**30**	**0.55** **0.85**	**1000** **3000**	**220**	**0**		
• **BYV 10–40**	**40**	**1000**	**500**	**40**	**0.55** **0.85**	**1000** **3000**	**220**	**0**		
BYV 10–60	60	1000	500	60	0.70 1	1000 3000	150	0		
• **TMM BAT 42**	**30**	**200**	**0.5**	**25**	**0.4** **0.65** **1**	**10** **50** **200**	**7**	**1**	**t_{rr} < 5 ns /10 mA**	MINIMELF GLASS
• **TMM BAT 43**	**30**	**200**	**0.5**	**25**	**0.45** **1**	**15** **200**	**7**	**1**	**η > 80% /45 MHz**	
TMM BAT 47	20	**350**	4	10	0.25 0.4 1	0.1 10 300	12	1	t_{rr} < 10 ns /10 mA	
TMM BAT 48	40	350	2	10	0.25 0.4	0.1 10	12	1	t_{rr} < 10 ns /10 mA	
TMM BAT 41	100	100	0.1	50	0.9 0.45 1	500 1 200	2	1		
• **TMM BAT 46**	**100**	**150**	**2**	**50**	**0.25** **0.45** **1**	**0.1** **10** **250**	**6**	**1**		
TM BAT 49	80	500	200	80	0.32 0.42 1	10 100 1000	120	0		MELF GLASS
• **TM BYV 10–20**	**20**	**1000**	**500**	**20**	**0.55** **0.85**	**1000** **3000**	**220**	**0**		
TM BYV 10–30	30	10000	500	30	0.55 0.85	1000 3000	220	0		
• **TM BYV 10–40**	**40**	**1000**	**500**	**40**	**0,55** **0.85**	**1000** **3000**	**200**	**0**		
TM BYV 10–60	60	1000	500	60	0.70 1	1000 3000	150	0		

• **Preferred device.**
η: Detection efficiency.
* Pulse test tp ≤ 300 μs, δ < 2%.