

REFERENCE

11-Jun-04
 ROHM CO.,LTD
 Tr.Manufacturing Div.

SPICE PARAMETER
2SA1036K

Characteristic of inner transistor

No.	NAME	PARAMETER	UNIT	DATA	
1	IS	Saturation Current	A	1.254500E-14	
2	BF	Forward Beta	—	330.949	
3	NF	Forward Emission Coefficient	—	1	
4	VAF	Forward Early Voltage	V	68.28	
5	IKF	BF High-Current Corner	A	0.375	
6	ISE	BE Saturation Current	A	1E-22	
7	NE	BE Emission Coefficient	—	1.18359	
8	BR	Reverse Beta	—	2	
9	NR	Reverse Emission Coefficient	—	1	Default
10	VAR	Reverse Early Voltage	V	6.828	
11	IKR	BR High-Current Corner	A	0.01	
12	ISC	BC Saturation Current	A	4.83798E-06	
13	NC	BC Emission Coefficient	—	2	
14	RC	Collector Resistance	Ω	0.257956	
15	RE	Emitter Resistance	Ω	0.233607	
16	RB	Base Resistance	Ω	0.331	
17	IRB	Current at RB=Half	A	5 or ∞	Default
18	RBM	Minimum RB at High current	Ω	0	Default
19	TF	Forward Transit Time	s	1E-10	
20	TR	Reverse Transit Time	s	1.00E-08	
21	XCJC	CJC Fraction to Internal Node	—	1.0	Default
22	MJC	BC Grading Coefficient	—	0.33	Default
23	VJC	BC potential	V	0.75	Default
24	CJC	BC zero-bias Depletion Capacitance	F	0	Default
25	MJE	BE Grading Coefficient	—	0.33	Default
26	VJE	BE potential	V	0.75	Default
27	CJE	BE zero-bias Depletion Capacitance	F	0	Default
28	MJS	Substrate Grading Coefficient	—	0.5	Default
29	VJS	Substrate potential	V	0.8	Default
30	CJS	Substrate zero-bias Capacitance	F	1E-15	Default
31	VTF	TF Dependency on Voltage	V	1000	Default
32	ITF	TF Dependency on Current	A	0	Default
33	XTF	TF Dependency on Base	—	0	Default
34	PTF	Reserved Parameter (RSV)	DEG	0	Default
35	XTB	Temperature Coefficient for Betas	—	1.5	Default
36	EG	Energy gap	eV	1.11	Default
37	XTI	Temperature Exponent for Betas	—	3.0	Default
38	KF	Friker Noise Coefficient	—	0.0	Default
39	AF	Friker Noise Exponent	—	1.0	Default
40	FC	Forward Bias Depletion Coefficient	—	0.5	Default